<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRK-170A</td>
<td>WRK-170A Phenol Standard (1X2 mL)</td>
</tr>
<tr>
<td>WRK-170B</td>
<td>WRK-170B o-Cresol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170C</td>
<td>WRK-170C m-Cresol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170D</td>
<td>WRK-170D p-Cresol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170E</td>
<td>WRK-170E 2,3-Xylenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170F</td>
<td>WRK-170F 2,4-Xylenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170G</td>
<td>WRK-170G 2,5-Xylenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170H</td>
<td>WRK-170H 2,6-Xylenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170I</td>
<td>WRK-170I 3,4-Xylenol Standard (1X2 mL)</td>
</tr>
<tr>
<td>WRK-170J</td>
<td>WRK-170J 3,5-Xylenol Standard (1X2 mL)</td>
</tr>
<tr>
<td>WRK-170K</td>
<td>WRK-170K o-Ethylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170L</td>
<td>WRK-170L m-Ethylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170M</td>
<td>WRK-170M p-Ethylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170N</td>
<td>WRK-170N 2-Isopropylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170O</td>
<td>WRK-170O 2-n-Propylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170P</td>
<td>WRK-170P 2,3,5-Trimethylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170Q</td>
<td>WRK-170Q 2,4,6-Trimethylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170R</td>
<td>WRK-170R 4-Tert-Butylphenol Standard (1 x 2 mL)</td>
</tr>
<tr>
<td>WRK-170S</td>
<td>WRK-170S 1-Naphthol Standard (1X2 mL)</td>
</tr>
<tr>
<td>WRK-170T</td>
<td>WRK-170T 2-Naphthol Standard (1 x 2 mL)</td>
</tr>
</tbody>
</table>
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
  - Trade name: Phenol Standard (1X2 mL)
  - Part number: WRK-170A
- **Relevant identified uses of the substance or mixture and uses advised against**
  - Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Agilent Technologies Manufacturing GmbH & Co. KG
    - Hewlett-Packard-Str.8
    - 76337 Waldbronn
    - Germany
  - **Further information obtainable from:**
    - Telephone: 0800 603 1000
    - pdl-msds_author@agilent.com
    - **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - ![GHS02 flame]
    - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - ![GHS08 health hazard]
    - Muta. 2 H341 Suspected of causing genetic defects.
  - ![GHS07]
    - Acute Tox. 4 H312 Harmful in contact with skin.
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
  - The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
  - GHS02  GHS07  GHS08

- **Signal word** Warning

(Contd. on page 2)
Trade name: Phenol Standard (1X2 mL)

· Hazard-determining components of labelling:
  p-xylene
  phenol

· Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H341 Suspected of causing genetic defects.

· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P201 Obtain special instructions before use.
  P202 Do not handle until all safety precautions have been read and understood.
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground/bond container and receiving equipment.
  P241 Use explosion-proof electrical/ventilating/lighting equipment.
  P242 Use only non-sparking tools.
  P243 Take precautionary measures against static discharge.
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P351+P338 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P308+P313 IF exposed or concerned: Get medical advice/attention.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P337+P313 If eye irritation persists: Get medical advice/attention.
  P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P325 Store in a well-ventilated place. Keep cool.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
  · Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
  · Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

<table>
<thead>
<tr>
<th>CAS:</th>
<th>106-42-3</th>
<th>p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS:</td>
<td>203-396-5</td>
<td>Flamm. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
</tr>
</tbody>
</table>
4 First aid measures

- **Description of first aid measures**
  - **General information:**
    - Immediately remove any clothing soiled by the product.
    - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - **After swallowing:** If symptoms persist consult doctor.
  - **Information for doctor:**
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:** CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - **For safety reasons unsuitable extinguishing agents:** Water with full jet
  - **Special hazards arising from the substance or mixture:** No further relevant information available.
  - **Advice for firefighters**
  - **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.
7 Handling and storage

- Handling:
- Precautions for safe handling: Open and handle receptacle with care.
- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
  Keep respiratory protective device available.
- Conditions for safe storage, including any incompatibilities:
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- Control parameters
- Ingredients with limit values that require monitoring at the workplace:
<table>
<thead>
<tr>
<th>Compound</th>
<th>WEL Short-term</th>
<th>Long-term</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
<tr>
<td>108-95-2 phenol</td>
<td>16 mg/m³, 4 ppm</td>
<td>7.8 mg/m³, 2 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Ingredients with biological limit values:
<table>
<thead>
<tr>
<th>Compound</th>
<th>WEL limit</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Additional information: The lists valid during the making were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing
  Wash hands before breaks and at the end of work.
  Store protective clothing separately.
  Avoid contact with the eyes and skin.
- Respiratory protection:
  When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved...
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.04.2019  Revision: 30.03.2019
Version number 1

Trade name: Phenol Standard (1X2 mL)

(Contd. of page 4)

- **Protection of hands:**
  Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**
  - For normal use: nitrile rubber, 11-13 mil thickness
  - For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**
  - For normal use: nitrile rubber: 1 hour
  - For direct contact with the chemical: butyl rubber: > 4 hours

- **Eye protection:**
  Tightly sealed goggles

---

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th><strong>Information on basic physical and chemical properties</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>Form: Fluid</td>
</tr>
<tr>
<td>Colour: According to product specification</td>
</tr>
<tr>
<td>Odour: Characteristic</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>pH-value:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not determined.</td>
</tr>
</tbody>
</table>

| **Change in condition**                                 |
| Melting point/freezing point: 13.3 °C                   |
| Initial boiling point and boiling range: 138 °C         |

<table>
<thead>
<tr>
<th><strong>Flash point:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>25 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Flammability (solid, gas):</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ignition temperature:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>525 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Decomposition temperature:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not determined.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Auto-ignition temperature:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Product is not selfigniting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Explosion properties:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
</tbody>
</table>

| **Explosion limits:**
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower:</td>
</tr>
<tr>
<td>1.7 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
</tr>
<tr>
<td>7.6 Vol %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Vapour pressure at 20 °C:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>9 hPa</td>
</tr>
</tbody>
</table>

| **Density at 20 °C:**
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.86588 g/cm²</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
</tr>
<tr>
<td>Not determined.</td>
</tr>
</tbody>
</table>
Trade name: Phenol Standard (1X2 mL)

- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with water at 20 °C: 0.2 g/l
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Solvent content:
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %
- Solids content: 2.3 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
  - Possibility of hazardous reactions: No dangerous reactions known.
  - Conditions to avoid: No further relevant information available.
  - Incompatible materials: No further relevant information available.
  - Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
    Harmful in contact with skin.
  - LD/LC50 values relevant for classification:

    | ATE (Acute Toxicity Estimates) |
    |-----------------------------|
    | Oral | LD50 | 12,140 mg/kg (rat) |
    | Dermal | LD50 | 1,083 mg/kg |
    | Inhalative | LC50/4 h | 129 mg/L |

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>108-95-2 phenol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
48.1.26

- Primary irritant effect:
- Skin corrosion/irritation
  Causes skin irritation.
- Serious eye damage/irritation
  Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity
  Suspected of causing genetic defects.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue

<table>
<thead>
<tr>
<th>HP 3</th>
<th>Flammable</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 4</td>
<td>Irritant - skin irritation and eye damage</td>
</tr>
<tr>
<td>HP 6</td>
<td>Acute Toxicity</td>
</tr>
<tr>
<td>HP 11</td>
<td>Mutagenic</td>
</tr>
</tbody>
</table>

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.
14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA: UN1307
- **UN proper shipping name**
  - ADR: 1307 XYLENES
  - IMDG, IATA: XYLENES
- **Transport hazard class(es)**
  - ADR, IMDG, IATA
  - **Class:** 3 Flammable liquids.
  - **Label:** 3
  - **Packing group**
    - ADR, IMDG, IATA: III
- **Environmental hazards:**
  - Not applicable.
- **Special precautions for user**
  - Warning: Flammable liquids.
  - Danger code (Kemler): 30
  - EMS Number: F-E,S-E
  - Stowage Category: A
- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.
- **Transport/Additional information:**
  - ADR
    - Limited quantities (LQ): 5L
    - Excepted quantities (EQ): Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
    - Transport category: 3
    - Tunnel restriction code: D/E
  - IMDG
    - Limited quantities (LQ): 5L
    - Excepted quantities (EQ): Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
- **UN "Model Regulation":** UN 1307 XYLENES, 3, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
Trade name: Phenol Standard (1X2 mL)

- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H301 Toxic if swallowed.
  - H311 Toxic in contact with skin.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H331 Toxic if inhaled.
  - H332 Harmful if inhaled.
  - H341 Suspected of causing genetic defects.
  - H373 May cause damage to organs through prolonged or repeated exposure.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 3: Acute toxicity – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - Muta. 2: Germ cell mutagenicity – Category 2
  - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** o-Cresol Standard (1 x 2 mL)
- **Part number:** WRK-170B

Reagents and Standards for Analytical Chemical Laboratory Use

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies Manufacturing GmbH & Co. KG
    Hewlett-Packard-Str.8
    76337 Waldbronn
    Germany
  - **Further information obtainable from:**
    Telephone: 0800 603 1000
    pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  
  ![GHS02 flame](image)  
  Flam. Liq. 3  H226 Flammable liquid and vapour.

  ![GHS07](image)  
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**
  ![GHS02](image)  ![GHS07](image)

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  - p-xylene
- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.

(Contd. on page 2)
Trade name: o-Cresol Standard (1 x 2 mL)

- Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground/bond container and receiving equipment.
  P241 Use explosion-proof electrical/ventilating/lighting equipment.
  P242 Use only non-sparking tools.
  P243 Take precautionary measures against static discharge.
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P301+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/
    shower.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P337+P338 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P235 Store in a well-ventilated place. Keep cool.
  P501 Dispose of contents/container in accordance with local/regional/national/international
    regulations.

- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Mixtures
  - Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:
  - CAS: 106-42-3
  - EINECS: 203-396-5
  - p-xylene
  - Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315
  - 100.0%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- Description of first aid measures
  - General information:
    Immediately remove any clothing soiled by the product.
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours
    after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
  - Information for doctor:
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
### Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

#### Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Biological limit value</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

#### Additional information:

The lists valid during the making were used as basis.

#### Exposure controls

- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.

#### Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

#### Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

#### Material of gloves

- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

#### Penetration time of glove material

- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

#### Eye protection:

Tightly sealed goggles
9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    - Form: Fluid
    - Colour: According to product specification
  - Odour: Characteristic
  - Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition
  - Melting point/freezing point: 13.3 °C
  - Initial boiling point and boiling range: 138.7 °C
- Flash point: 25 °C
- Flammability (solid, gas): Not applicable.
- Ignition temperature: 525 °C
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Explosion limits: 1.7 Vol %
  - Lower:
  - Upper: 7.6 Vol %
- Vapour pressure at 20 °C: 9 hPa
- Density at 20 °C: 0.861 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not determined.
  - Evaporation rate: Not determined.
- Solubility in / Miscibility with water at 20 °C: 0.2 g/l
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:
  - Dynamic at 20 °C: 0.648 mPas
  - Kinematic: Not determined.
- Solvent content:
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %
- Solids content: 0.0 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
    Harmful in contact with skin.
  - LD/LC50 values relevant for classification:
    | ATE (Acute Toxicity Estimates) |
    | Dermal  | LD50  | 1,100 mg/kg |

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation
    Causes skin irritation.
  - Serious eye damage/irritation
    Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation
    Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity
    Based on available data, the classification criteria are not met.
  - Carcinogenicity
    Based on available data, the classification criteria are not met.
  - Reproductive toxicity
    Based on available data, the classification criteria are not met.
  - STOT-single exposure
    Based on available data, the classification criteria are not met.
  - STOT-repeated exposure
    Based on available data, the classification criteria are not met.
  - Aspiration hazard
    Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
13 Disposal considerations

- Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue
  HP 3    Flammable
  HP 4    Irritant - skin irritation and eye damage
  HP 6    Acute Toxicity

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR, IMDG, IATA: UN1307

- UN proper shipping name
  - ADR: 1307 XYLENES
  - IMDG, IATA: XYLENES

- Transport hazard class(es)
  - ADR, IMDG, IATA: 3 Flammable liquids.

- Class
  - Label: 3

- Packing group
  - ADR, IMDG, IATA: III

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Warning: Flammable liquids.

- Danger code (Kemler):
  - 30

- EMS Number:
  - F-E,S-E

- Stowage Category
  - A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- Transport/Additional information:

  - Limited quantities (LQ):
    - 5L
Trade name: o-Cresol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>· Excerpted quantities (EQ)</th>
<th>Code: E1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
<td></td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
<td></td>
</tr>
</tbody>
</table>

| · Transport category            | 3        |
| · Tunnel restriction code       | D/E      |

| · IMDG                           | 5L       |
| · Limited quantities (LQ)        | Code: E1 |
| · Excerpted quantities (EQ)      |          |
| Maximum net quantity per inner packaging: 30 ml |          |
| Maximum net quantity per outer packaging: 1000 ml |          |

| · UN "Model Regulation":        | UN 1307 XYLENES, 3, III |

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Directive 2012/18/EU
  · Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
  H332 Harmful if inhaled.

· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flm. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name**: m-Cresol Standard (1 x 2 mL)
- **Part number**: WRK-170C

Reagents and Standards for Analytical Chemical Laboratory Use

- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**: Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany

- **Further information obtainable from**:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- **Emergency telephone number**: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

- **Hazard pictograms**
  GHS02 flame
  GHS07

- **Hazard statements**
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

- **Signal word** Warning
- **Hazard-determining components of labelling**
  p-xylene

(Contd. on page 2)
Trade name: m-Cresol Standard (1 x 2 mL)

- Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:
  | CAS: 106-42-3 | p-xylene | 100.0% |
  | EINECS: 203-396-5 | Flam. Liq. 3, H226 | Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315 |

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed No further relevant information available.
5 Firefighting measures

- **Extinguishing media**
  - Suitable extinguishing agents:
    - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s) No further relevant information available.
· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL Short-term value: 441 mg/m³, 100 ppm</td>
</tr>
<tr>
<td>Long-term value: 220 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>Sk; BMGV</td>
</tr>
</tbody>
</table>

· Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGV 650 mmol/mol creatinine</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Sampling time: post shift</td>
</tr>
<tr>
<td>Parameter: methyl hippuric acid</td>
</tr>
</tbody>
</table>

· Additional information: The lists valid during the making were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

· Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:

Tightly sealed goggles

(Contd. on page 5)
## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:** Fluid
  - **Form:** Fluid
  - **Colour:** According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
- **pH-value:** Not determined.

### Change in condition
- **Melting point/freezing point:** 13.3 °C
- **Initial boiling point and boiling range:** 138.7 °C
- **Flash point:** 25 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 525 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.

### Explosive properties:
Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
  - **Lower:** 1.7 Vol %
  - **Upper:** 7.6 Vol %
- **Vapour pressure at 20 °C:** 9 hPa
- **Density at 20 °C:** 0.861 g/cm³
- **Relative density**
  - Not determined.
- **Vapour density**
  - Not determined.
- **Evaporation rate**
  - Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - **Dynamic at 20 °C:** 0.648 mPas
  - **Kinematic:** Not determined.
- **Solvent content:**
  - **Organic solvents:** 100.0 %
  - **VOC (EC)** 100.00 %
- **Solids content:** 0.0 %
- **Other information**
  - No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
48.1.26

- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
    Harmful in contact with skin.
  - LD/LC50 values relevant for classification:

    | ATE (Acute Toxicity Estimates) |
    | Dermal | LD50 | 1,100 mg/kg |
    | 106-42-3 p-xylene |
    | Oral | LD50 | 5,000 mg/kg (rat) |
    | Inhalative | LC50/4 h | 4,550 mg/L (rat) |
  - Primary irritant effect:
    - Skin corrosion/irritation
      Causes skin irritation.
  - Serious eye damage/irritation: Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT-single exposure: Based on available data, the classification criteria are not met.
  - STOT-repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behaviour in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Additional ecological information:
  - General notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**
  - HP 3 Flammable
  - HP 4 Irritant - skin irritation and eye damage
  - HP 6 Acute Toxicity

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA UN1307

- **UN proper shipping name**
  - ADR 1307 XYLENES
  - IMDG, IATA XYLENES

- **Transport hazard class(es)**
  - ADR, IMDG, IATA 3 Flammable liquids.

- **Packing group**
  - ADR, IMDG, IATA III

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - Warning: Flammable liquids.

- **Danger code (Kemler):**
  - 30

- **EMS Number:**
  - F-E,S,E

- **Stowage Category:**
  - A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - ADR
  - Limited quantities (LQ) 5L
### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.04.2019  
Revision: 31.03.2019  
Version number 1

**Trade name:** m-Cresol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
</table>
| **Excepted quantities (EQ)** Code: E1 | Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml |
| **Transport category** | 3 |
| **Tunnel restriction code** | D/E |
| **IMDG** |  |
| **Limited quantities (LQ)** | 5L |
| **Excepted quantities (EQ)** Code: E1 | Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml |
| **UN "Model Regulation":** | UN 1307 XYLENES, 3, III |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.
- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

· Product identifier
· Trade name: p-Cresol Standard (1 x 2 mL)
· Part number: WRK-170D
· Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
· Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
· Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

· Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008
  GHS02 flame
  Flam. Liq. 3  H226 Flammable liquid and vapour.
· GHS07
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.
· Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
· Hazard pictograms
  GHS02  GHS07
· Signal word Warning
· Hazard-determining components of labelling:
  p-xylene
· Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
Trade name: p-Cresol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101: If medical advice is needed, have product container or label at hand.
  - P102: Keep out of reach of children.
  - P103: Read label before use.
  - P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233: Keep container tightly closed.
  - P240: Ground/bond container and receiving equipment.
  - P241: Use explosion-proof electrical/ventilating/lighting equipment.
  - P242: Use only non-sparking tools.
  - P243: Take precautionary measures against static discharge.
  - P264: Wash thoroughly after handling.
  - P280: Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312: Call a POISON CENTER/doctor if you feel unwell.
  - P321: Specific treatment (see on this label).
  - P362+P364: Take off contaminated clothing and wash it before reuse.
  - P332+P333: If skin irritation occurs: Get medical advice/attention.
  - P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235: Store in a well-ventilated place. Keep cool.
  - P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

| CAS: 106-42-3 | p-xylene | 100.0% |
| EINECS: 203-396-5 | Flam. Liq. 3, H226, Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315 |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** No special precautions are necessary if used correctly.
  - **Information about fire - and explosion protection:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles** No special requirements.
  - **Information about storage in one common storage facility** Not required.
  - **Further information about storage conditions** Keep container tightly sealed.
  - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities** No further data; see item 7.
Trade name: p-Cresol Standard (1 x 2 mL)

**Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>WEL Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

**Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>BMGV 650 mmol/mol creatinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Medium: urine</td>
</tr>
</tbody>
</table>

**Additional information:** The lists valid during the making were used as basis.

**Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

**Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

**Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

**Material of gloves**

- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

**Penetration time of glove material**

- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

**Eye protection:**

Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

  - **General Information**
  - **Appearance:**
    - Form: Fluid
    - Colour: According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/freezing point:** 13.3 °C
  - **Initial boiling point and boiling range:** 138.7 °C

- **Flash point:** 25 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 525 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
  - Lower: 1.7 Vol %
  - Upper: 7.6 Vol %

- **Vapour pressure at 20 °C:** 9 hPa

- **Density at 20 °C:** 0.861 g/cm³

- **Relative density**
  - Not determined.

- **Vapour density**
  - Not determined.

- **Evaporation rate**
  - Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**
  - Dynamic at 20 °C: 0.648 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %

- **Solids content:** 0.0 %

- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
· Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions: No dangerous reactions known.
· Conditions to avoid: No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects
  · Acute toxicity
  ʼ Harmful in contact with skin.
  · LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Dermal</th>
<th>LD50</th>
<th>1,100 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Oral</td>
<td>LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

· Primary irritant effect:
  · Skin corrosion/irritation
  ʼ Causes skin irritation.
  · Serious eye damage/irritation
  Based on available data, the classification criteria are not met.
  · Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
  · CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  · Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
  · Carcinogenicity
  Based on available data, the classification criteria are not met.
  · Reproductive toxicity
  Based on available data, the classification criteria are not met.
  · STOT-single exposure
  Based on available data, the classification criteria are not met.
  · STOT-repeated exposure
  Based on available data, the classification criteria are not met.
  · Aspiration hazard
  Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability: No further relevant information available.
· Behaviour in environmental systems:
· Bioaccumulative potential: No further relevant information available.
· Mobility in soil: No further relevant information available.
· Additional ecological information:
· General notes:
  · Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

### European waste catalogue

<table>
<thead>
<tr>
<th>HP 3</th>
<th>Flammable</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 4</td>
<td>Irritant - skin irritation and eye damage</td>
</tr>
<tr>
<td>HP 6</td>
<td>Acute Toxicity</td>
</tr>
</tbody>
</table>

### Uncleaned packaging:
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **UN-Number**
- **ADR, IMDG, IATA**
  - UN1307

- **UN proper shipping name**
- **ADR, IMDG, IATA**
  - 1307 XYLENES
  - XYLENES

- **Transport hazard class(es)**
- **ADR, IMDG, IATA**

### Class
- 3 Flammable liquids.

### Label
- 3

- **Packing group**
- **ADR, IMDG, IATA**
  - III

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
- **Warning:** Flammable liquids.

- **Danger code (Kemler):**
  - 30

- **EMS Number:**
  - F-E,S-E

- **Stowage Category**
  - A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
- **ADR**
  - Limited quantities (LQ)
  - 5L
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: 2,3-Xylenol Standard (1 x 2 mL)
- Part number: WRK-170E
- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use

- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany

- Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
  Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

  ![GHS02 flame]
  Flam. Liq. 3  H226 Flammable liquid and vapour.

  ![GHS07]
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.

- Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.

- Hazard pictograms

  ![GHS02 GHS07]

- Signal word Warning

- Hazard-determining components of labelling:
  p-xylene

- Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

(Contd. on page 2)
Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P291 Contains p-xylene which may cause respiratory irritation.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P385 In case of fire: Use dry powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/ regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS:</th>
<th>106-42-3</th>
<th>EINECS:</th>
<th>203-396-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-xylene</td>
<td>Flam. Liq. 3, H226, Acute Tox. 4, H312, Acute Tox. 4, H332, Skin Irrit. 2, H315</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|GB| 100.0% |

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.
Trade name: 2,3-Xylenol Standard (1 x 2 mL)

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
Trade name: 2,3-Xylenol Standard (1 x 2 mL)

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**
  
  106-42-3 p-xylene
  
<table>
<thead>
<tr>
<th>WEL</th>
<th>Long-term value: 220 mg/m³, 50 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sk; BMGV</td>
<td>Short-term value: 441 mg/m³, 100 ppm</td>
</tr>
</tbody>
</table>

- **Ingredients with biological limit values:**
  
  106-42-3 p-xylene
  
<table>
<thead>
<tr>
<th>BMGV</th>
<th>650 mmol/mol creatinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium: urine</td>
<td>Sampling time: post shift</td>
</tr>
<tr>
<td>Parameter: methyl hippuric acid</td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**
  
  Keep away from foodstuffs, beverages and feed.

  Immediately remove all soiled and contaminated clothing

  Wash hands before breaks and at the end of work.

  Avoid contact with the skin.

  Avoid contact with the eyes and skin.

- **Respiratory protection:**
  
  When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**
  
  Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**
  
  For normal use: nitrile rubber, 11-13 mil thickness

  For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**
  
  For normal use: nitrile rubber: 1 hour

  For direct contact with the chemical: butyl rubber: > 4 hours

- **Eye protection:**

  Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Fluid
    - Colour: According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - Melting point/freezing point: 13.3 °C
  - Initial boiling point and boiling range: 138.7 °C

- **Flash point:** 25 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 525 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:**
  - Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
  - Lower: 1.7 Vol %
  - Upper: 7.6 Vol %

- **Vapour pressure at 20 °C:** 9 hPa

- **Density at 20 °C:** 0.861 g/cm³
- **Relative density** (Not determined.)
- **Vapour density** (Not determined.)
- **Evaporation rate** (Not determined.)

- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**
  - Dynamic at 20 °C: 0.648 mPas
    - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %

- **Solids content:** 0.0 %
- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
    Harmful in contact with skin.

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimates)</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
<tr>
<td>1,100 mg/kg</td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

<table>
<thead>
<tr>
<th>Primary irritant effect:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Causes skin irritation.</td>
</tr>
</tbody>
</table>

- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability No further relevant information available.
  - Behaviour in environmental systems:
    - Bioaccumulative potential No further relevant information available.
    - Mobility in soil No further relevant information available.
  - Additional ecological information:
    - General notes:
      Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
      Do not allow product to reach ground water, water course or sewage system.
      Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
48.1.26

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
  · Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue
  HP 3  Flammable
  HP 4  Irritant - skin irritation and eye damage
  HP 6  Acute Toxicity

· Uncleaned packaging:
  · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
  · ADR, IMDG, IATA
    UN1307

· UN proper shipping name
  · ADR
  1307 XYLENES
  · IMDG, IATA
  XYLENES

· Transport hazard class(es)
  · ADR, IMDG, IATA

  
  · Class
  3 Flammable liquids.
  · Label
  3

· Packing group
  · ADR, IMDG, IATA
  III

· Environmental hazards:
  Not applicable.

· Special precautions for user
  · Warning: Flammable liquids.
  · Danger code (Kemler):
    30
  · EMS Number:
    F-E,S-E
  · Stowage Category
    A

· Transport in bulk according to Annex II of Marpol and the IBC Code
  Not applicable.

· Transport/Additional information:
  · ADR
  · Limited quantities (LQ)
    5L
Trade name: 2,3-Xylenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - **Tunnel restriction code**
    - 3
    - D/E

- **IMDG**
  - **Limited quantities (LQ)**
    - 5L
  - **Excepted quantities (EQ)**
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 2,4-Xylenol Standard (1 x 2 mL)
- **Part number:** WRK-170F
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  **Manufacturer/Supplier:**
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- **Further information obtainable from:**
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
  **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

  - GHS02 flame
    Flam. Liq. 3  H226 Flammable liquid and vapour.
  - GHS07
    Acute Tox. 4  H312 Harmful in contact with skin.
    Skin Irrit. 2  H315 Causes skin irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
  - GHS02
  - GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  p-xylene
- **Hazard statements**
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

(Contd. on page 2)
Trade name: 2,4-Xylenol Standard (1 x 2 mL)

- **Precautionary statements**
  
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground/bond container and receiving equipment.
  P241 Use explosion-proof electrical/ventilating/lighting equipment.
  P242 Use only non-sparking tools.
  P243 Take precautionary measures against static discharge.
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P235 Store in a well-ventilated place. Keep cool.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT**: Not applicable.
- **vPvB**: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation**: Mixtures
- **Description**: Mixture of substances listed below with nonhazardous additions.

- **Dangerous components**

<table>
<thead>
<tr>
<th>CAS: 106-42-3</th>
<th>EINECS: 203-396-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-xylene</td>
<td>Flam. Liq. 3, H226, Acute Tox. 4, H312, Acute Tox. 4, H332, Skin Irrit. 2, H315</td>
</tr>
</tbody>
</table>

- **Additional information**: For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information**
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  **After inhalation**: In case of unconsciousness place patient stably in side position for transportation.
  **After skin contact**: Immediately wash with water and soap and rinse thoroughly.
  **After eye contact**: Rinse opened eye for several minutes under running water.
  **After swallowing**: If symptoms persist consult doctor.
  **Information for doctor**
  **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
<tr>
<td></td>
<td>WEL</td>
<td></td>
<td>Sk; BMGV</td>
</tr>
</tbody>
</table>

· Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Limit Value</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

· Additional information: The lists valid during the making were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.

· Respiratory protection:
  - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· Protection of hands:
  - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves
  - For normal use: nitrile rubber, 11-13 mil thickness
  - For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material
  - For normal use: nitrile rubber: 1 hour
  - For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:

Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - **Form:** Fluid
    - **Colour:** According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point/freezing point:** 13.3 °C
    - **Initial boiling point and boiling range:** 138.7 °C
  - **Flash point:** 25 °C
  - **Flammability (solid, gas):** Not applicable.
  - **Ignition temperature:** 525 °C
  - **Decomposition temperature:** Not determined.
  - **Auto-ignition temperature:** Product is not selfigniting.
  - **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  - **Explosion limits:**
    - **Lower:** 1.7 Vol %
    - **Upper:** 7.6 Vol %
  - **Vapour pressure at 20 °C:** 9 hPa
  - **Density at 20 °C:** 0.861 g/cm³
  - **Relative density:** Not determined.
  - **Vapour density:** Not determined.
  - **Evaporation rate:** Not determined.
  - **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l
  - **Partition coefficient: n-octanol/water:** Not determined.
  - **Viscosity:**
    - **Dynamic at 20 °C:** 0.648 mPas
    - **Kinematic:** Not determined.
  - **Solvent content:**
    - **Organic solvents:** 100.0 %
    - **VOC (EC):** 100.00 %
  - **Solids content:** 0.0 %
  - **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
Trade name: 2,4-Xylenol Standard (1 x 2 mL)

- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful in contact with skin.
- LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Dermal LD50</th>
<th>1,100 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Oral LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
- Skin corrosion/irritation
  Causes skin irritation.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**
  
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

<table>
<thead>
<tr>
<th>HP 3</th>
<th>Flammable</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 4</td>
<td>Irritant - skin irritation and eye damage</td>
</tr>
<tr>
<td>HP 6</td>
<td>Acute Toxicity</td>
</tr>
</tbody>
</table>

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA
  
  UN1307

- **UN proper shipping name**
  - ADR
  
  1307 XYLENES
  - IMDG, IATA
  
  XYLENES

- **Transport hazard class(es)**
  - ADR, IMDG, IATA

- **Class**
  - 3 Flammable liquids.

- **Label**
  - 3

- **Packing group**
  - ADR, IMDG, IATA
  
  III

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - Warning: Flammable liquids.

- **Danger code (Kemler):**
  - 30

- **EMS Number:**
  - F-E,S-E

- **Stowage Category**
  - A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**

  - **ADR**
  - Limited quantities (LQ)
  
  5L
Trade name: 2,4-Xylenol Standard (1 x 2 mL)

- Excepted quantities (EQ)
  Code: E1
  Maximum net quantity per inner packaging: 30 ml
  Maximum net quantity per outer packaging: 1000 ml

- Transport category
  - Tunnel restriction code
    3
    D/E

- IMDG
  - Limited quantities (LQ)
    5L
  - Excepted quantities (EQ)
    Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation":
  UN 1307 XYLENES, 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
  H332 Harmful if inhaled.

- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: 2,5-Xylenol Standard (1 x 2 mL)
- Part number: WRK-170G
- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

  ![GHS02 flame]
  Flam. Liq. 3    H226 Flammable liquid and vapour.

  ![GHS07]
  Acute Tox. 4    H312 Harmful in contact with skin.
  Skin Irrit. 2   H315 Causes skin irritation.

- Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
- Hazard pictograms

  ![GHS02 GHS07]

- Signal word Warning
- Hazard-determining components of labelling:
  p-xylene
- Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

(Contd. on page 2)
Trade name: 2,5-Xylenol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101: If medical advice is needed, have product container or label at hand.
  - P102: Keep out of reach of children.
  - P103: Read label before use.
  - P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233: Keep container tightly closed.
  - P240: Ground/bond container and receiving equipment.
  - P241: Use explosion-proof electrical/ventilating/lighting equipment.
  - P242: Use only non-sparking tools.
  - P243: Take precautionary measures against static discharge.
  - P264: Wash thoroughly after handling.
  - P280: Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312: Call a POISON CENTER/doctor if you feel unwell.
  - P321: Specific treatment (see on this label).
  - P362+P364: Take off contaminated clothing and wash it before reuse.
  - P332+P313: If skin irritation occurs: Get medical advice/attention.
  - P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235: Store in a well-ventilated place. Keep cool.
  - P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

---

3 Composition/information on ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**
  - CAS: 106-42-3
  - EINECS: 203-396-5
  - p-xylene (Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315) 100.0%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

---

4 First aid measures

- **Description of first aid measures**
- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
Trade name: 2,5-Xylenol Standard (1 x 2 mL)

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
  · Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  · For safety reasons unsuitable extinguishing agents: Water with full jet

- Special hazards arising from the substance or mixture No further relevant information available.

- Advice for firefighters
  · Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.

- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.

- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  · Precautions for safe handling No special precautions are necessary if used correctly.
  · Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities
  · Storage:
    · Requirements to be met by storerooms and receptacles: No special requirements.
    · Information about storage in one common storage facility: Not required.
    · Further information about storage conditions: Keep container tightly sealed.
  · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

(Contd. on page 4)
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Sk; BMGV</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGV</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

Eye protection:

Tightly sealed goggles
## 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Fluid</td>
</tr>
<tr>
<td>Colour</td>
<td>According to product specification</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined.</td>
</tr>
<tr>
<td>pH-value</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>13.3 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>138.7 °C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>25 °C</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong></td>
<td>525 °C</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1.7 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>7.6 Vol %</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C</strong></td>
<td>9 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C</strong></td>
<td>0.861 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water at 20 °C</strong></td>
<td>0.2 g/l</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic at 20 °C</td>
<td>0.648 mPas</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solvent content</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents</td>
<td>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td><strong>Solids content</strong></td>
<td>0.0 %</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
Trade name: 2,5-Xylenol Standard (1 x 2 mL)

- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful in contact with skin.
- LD/LC50 values relevant for classification:
  ATE (Acute Toxicity Estimates)
  | Dermal | LD50 | 1,100 mg/kg
  | 106-42-3 p-xylene |
  | Oral | LD50 | 5,000 mg/kg (rat)
  | Inhalative | LC50/4 h | 4,550 mg/L (rat)
- Primary irritant effect:
- Skin corrosion/irritation
  Causes skin irritation.
- Serious eye damage/irritation
  Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
- Carcinogenicity
  Based on available data, the classification criteria are not met.
- Reproductive toxicity
  Based on available data, the classification criteria are not met.
- STOT-single exposure
  Based on available data, the classification criteria are not met.
- STOT-repeated exposure
  Based on available data, the classification criteria are not met.
- Aspiration hazard
  Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**
  - HP 3 Flammable
  - HP 4 Irritant - skin irritation and eye damage
  - HP 6 Acute Toxicity

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **ADR, IMDG, IATA**
  UN1307

- **UN proper shipping name**
  - ADR
  - IMDG, IATA
  1307 XYLENES
  XYLENES

- **Transport hazard class(es)**
  - ADR, IMDG, IATA

- **Class**
  3 Flammable liquids.

- **Label**
  3

- **Packing group**
  - ADR, IMDG, IATA
  III

- **Environmental hazards:**
  Not applicable.

- **Special precautions for user**
  Warning: Flammable liquids.

- **Danger code (Kemler):**
  30

- **EMS Number:**
  F-E,S-E

- **Stowage Category**
  A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  Not applicable.

- **Transport/Additional information:**
  - ADR
  - Limited quantities (LQ) 5L
Safety data sheet
down to 1907/2006/EC, Article 31

Printing date 01.04.2019 Version number 1 Revision: 31.03.2019

Trade name: 2,5-Xylenol Standard (1 x 2 mL)

(Contd. of page 7)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - Tunnel restriction code: 3
  - IMDG
  - Limited quantities (LQ)
    - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category
    - P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: 2,6-Xylenol Standard (1 x 2 mL)
- Part number: WRK-170H
- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany

- Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

  GHS02 flame
  Flam. Liq. 3  H226 Flammable liquid and vapour.

  GHS07
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.

- Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
- Hazard pictograms

  GHS02  GHS07

- Signal word Warning
- Hazard-determining components of labelling:
  p-xylene
- Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
  · Description: Mixture of substances listed below with nonhazardous additions.

3.2 Hazardous components:

<table>
<thead>
<tr>
<th>CAS: 106-42-3</th>
<th>p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 203-396-5</td>
<td>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures
  · General information:
    Immediately remove any clothing soiled by the product.
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  · After inhalation: In case of unconscionableness place patient stably in side position for transportation.
  · After skin contact: Immediately wash with water and soap and rinse thoroughly.
  · After eye contact: Rinse opened eye for several minutes under running water.
  · After swallowing: If symptoms persist consult doctor.
  · Information for doctor:
    · Most important symptoms and effects, both acute and delayed: No further relevant information available.
5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>WEL Short-term</th>
<th>Long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Substance</th>
<th>BMGV 650 mmol/mol creatinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Medium: urine, Sampling time: post shift, Parameter: methyl hippuric acid</td>
</tr>
</tbody>
</table>

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

Respiratory protection:
- When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
- Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

Protection of hands:
- Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves:
- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material:
- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

Eye protection:
- Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**
  - **Appearance:**
    - **Form:** Fluid
    - **Colour:** According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/freezing point:** 13.3 °C
  - **Initial boiling point and boiling range:** 138.7 °C

- **Flash point:** 25 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 525 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:**
  - Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
  - **Lower:** 1.7 Vol %
  - **Upper:** 7.6 Vol %

- **Vapour pressure at 20 °C:** 9 hPa

- **Density at 20 °C:** 0.861 g/cm³
  - **Relative density:** Not determined.
  - **Vapour density:** Not determined.
  - **Evaporation rate:** Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**
  - **Dynamic at 20 °C:** 0.648 mPas
  - **Kinematic:** Not determined.

- **Solvent content:**
  - **Organic solvents:** 100.0 %
  - **VOC (EC):** 100.00 %

- **Solids content:** 0.0 %

- **Other information:** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
Safe data sheet  
according to 1907/2006/EC, Article 31  

Trade name: 2,6-Xylenol Standard (1 x 2 mL)

- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

## 11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
    Harmful in contact with skin.
  - LD/LC50 values relevant for classification:
    **ATE (Acute Toxicity Estimates)**
    | Type   | LD50  | LC50  |
    |--------|-------|-------|
    | Dermal | 1,100 mg/kg |       |

### 106-42-3 p-xylene

<table>
<thead>
<tr>
<th>Type</th>
<th>LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,550 mg/L (rat)</td>
<td></td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation
    Causes skin irritation.
  - Serious eye damage/irritation Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity Based on available data, the classification criteria are not met.
  - Carcinogenicity Based on available data, the classification criteria are not met.
  - Reproductive toxicity Based on available data, the classification criteria are not met.
  - STOT-single exposure Based on available data, the classification criteria are not met.
  - STOT-repeated exposure Based on available data, the classification criteria are not met.
  - Aspiration hazard Based on available data, the classification criteria are not met.

## 12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability No further relevant information available.
  - Behaviour in environmental systems:
  - Bioaccumulative potential No further relevant information available.
  - Mobility in soil No further relevant information available.
  - Additional ecological information:
  - General notes:
    Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

(Contd. on page 7)
### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**
  - HP 3 Flammable
  - HP 4 Irritant - skin irritation and eye damage
  - HP 6 Acute Toxicity

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA UN1307

- **UN proper shipping name**
  - ADR 1307 XYLENES
  - IMDG, IATA XYLENES

- **Transport hazard class(es)**
  - ADR, IMDG, IATA

  - **Class**
    - 3 Flammable liquids.
  - **Label**
    - 3

- **Packing group**
  - ADR, IMDG, IATA III

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - Warning: Flammable liquids.
  - Danger code (Kemler): 30
  - EMS Number: F-E,S-E

- **Stowage Category**
  - A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - ADR
  - Limited quantities (LQ) 5L
Trade name: 2,6-Xylenol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>Excepted quantities (EQ)</th>
<th>Code: E1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
<td></td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport category</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tunnel restriction code</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN &quot;Model Regulation&quot;:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 1307 XYLENES, 3, III</td>
</tr>
</tbody>
</table>

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 3,4-Xylenol Standard (1X2 mL)
- **Part number:** WRK-170I
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies Manufacturing GmbH & Co. KG
    Hewlett-Packard-Str.8
    76337 Waldbronn
    Germany
  - **Further information obtainable from:**
    Telephone: 0800 603 1000
    pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

  - GHS02 flame

  Flam. Liq. 3  H226 Flammable liquid and vapour.

  - GHS07

  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.
  Eye Irrit. 2  H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**

  - GHS02
  - GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**
  - p-xylene
  - 3,4-xylenol

- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
Trade name: 3,4-Xylenol Standard (1X2 mL)

H315 Causes skin irritation.
H319 Causes serious eye irritation.

· Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P351+P338 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 IF SKIN IRRITATION OCCURS: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS:</th>
<th>Substance</th>
<th>Hazards</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>203-396-5</td>
<td>p-xylene</td>
<td>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrt. 2, H315</td>
<td>97.677%</td>
</tr>
<tr>
<td>95-65-8</td>
<td>202-439-5</td>
<td>3,4-xyleneol</td>
<td>Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Corr. 1B, H314; Aquatic Chronic 2, H411</td>
<td>2.323%</td>
</tr>
</tbody>
</table>

· Additional information: For the wording of the listed hazard phrases refer to section 16.
4 First aid measures

· Description of first aid measures
  · General information:
    Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact: Immediately wash with water and soap and rinse thoroughly.
  · After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  · After swallowing: If symptoms persist consult doctor.
  · Information for doctor:
    · Most important symptoms and effects, both acute and delayed No further relevant information available.
    · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Firefighting measures

· Extinguishing media
  · Suitable extinguishing agents:
    CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  · For safety reasons unsuitable extinguishing agents: Water with full jet
  · Special hazards arising from the substance or mixture No further relevant information available.
  · Advice for firefighters
    · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
· Environmental precautions: Do not allow to enter sewers/ surface or ground water.
· Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
· Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

· Handling:
  · Precautions for safe handling No special precautions are necessary if used correctly.
  · Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
Trade name: 3,4-Xylenol Standard (1X2 mL)

· Conditions for safe storage, including any incompatibilities
  · Storage:
  · Requirements to be met by storerooms and receptacles: No special requirements.
  · Information about storage in one common storage facility: Not required.
  · Further information about storage conditions: Keep container tightly sealed.
  · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

· Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td></td>
</tr>
</tbody>
</table>
| WEL | Short-term value: 441 mg/m³, 100 ppm  
Long-term value: 220 mg/m³, 50 ppm  
Sk; BMGV |

<table>
<thead>
<tr>
<th>Ingredients with biological limit values:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td></td>
</tr>
</tbody>
</table>
| BMGV | 650 mmol/mol creatinine  
Medium: urine  
Sampling time: post shift  
Parameter: methyl hippuric acid |

· Additional information: The lists valid during the making were used as basis.

· Exposure controls
  · Personal protective equipment:
  · General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing
    Wash hands before breaks and at the end of work.
    Avoid contact with the eyes and skin.
  · Respiratory protection:
    When used as intended with Agilent instruments the use of the product under normal laboratory conditions and
    with standard practices does not result in significant airborne exposures and therefore respiratory protection is not
    needed.
    Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved
    device equipment with appropriate organic or acid gas cartridge.
  · Protection of hands:
    Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil
    thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct
    contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times
    exceeding 4 hrs. Supplier recommendations should be followed.
  · Material of gloves
    For normal use: nitrile rubber, 11-13 mil thickness
    For direct contact with the chemical: butyl rubber, 12-15 mil thickness
  · Penetration time of glove material
    For normal use: nitrile rubber: 1 hour
    For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)
#### 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

- **Appearance:** Fluid
- **Form:** Fluid
- **Colour:** According to product specification
- **Odour:** Characteristic
- **Odour threshold:** Not determined.

**pH-value:** Not determined.

**Change in condition**

- **Melting point/freezing point:** 13.3 °C
- **Initial boiling point and boiling range:** 138 °C

**Flash point:** 25 °C

**Flammability (solid, gas):** Not applicable.

**Ignition temperature:** 525 °C

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**Explosion limits:**

- **Lower:** 1.7 Vol %
- **Upper:** 7.6 Vol %

**Vapour pressure at 20 °C:** 9 hPa

**Density at 20 °C:** 0.86599 g/cm³

**Relative density**

- Not determined.

**Vapour density**

- Not determined.

**Evaporation rate**

- Not determined.

**Solubility in / Miscibility with water at 20 °C:** 0.2 g/l

**Partition coefficient: n-octanol/water:** Not determined.

**Viscosity**

- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

**Solvent content:**

- **Organic solvents:** 97.7 %

(Contd. on page 6)
48.1.26 VOC (EC) 97.68 %

Other information
No further relevant information available.

10 Stability and reactivity

- Reactivity No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful in contact with skin.
- LD/LC50 values relevant for classification:

  ATE (Acute Toxicity Estimates)

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>31,297 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>1,036 mg/kg</td>
</tr>
</tbody>
</table>

  106-42-3 p-xylene

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

  95-65-8 3,4-xylenol

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>727 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation
    Causes skin irritation.
  - Serious eye damage/irritation
    Causes serious eye irritation.
  - Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity Based on available data, the classification criteria are not met.
  - Carcinogenicity Based on available data, the classification criteria are not met.
  - Reproductive toxicity Based on available data, the classification criteria are not met.
  - STOT-single exposure Based on available data, the classification criteria are not met.
  - STOT-repeated exposure Based on available data, the classification criteria are not met.
  - Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
48.1.26
- Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment:
  PBT: Not applicable.
  vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations
- Waste treatment methods
- Recommendation:
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- European waste catalogue
  HP 3 Flammable
  HP 4 Irritant - skin irritation and eye damage
  HP 6 Acute Toxicity
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information
- UN-Number
  ADR, IMDG, IATA UN1307
- UN proper shipping name
  ADR 1307 XYLENES
  IMDG, IATA XYLENES
- Transport hazard class(es)
  ADR, IMDG, IATA
  - Class
  3 Flammable liquids.
  - Label
  3
- Packing group
  ADR, IMDG, IATA III
- Environmental hazards:
  Not applicable.
48. Special precautions for user

Warning: Flammable liquids.

Danger code (Kemler): 30

EMS Number: F-E,S-E

Stowage Category: A

Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

Transport/Additional information:

- ADR
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ): Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- Transport category: 3
- Tunnel restriction code: D/E

- IMDG
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ): Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation": UN 1307 XYLENES, 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements: 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements: 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  - H226 Flammable liquid and vapour.
  - H301 Toxic if swallowed.
  - H311 Toxic in contact with skin.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.
  - H411 Toxic to aquatic life with long lasting effects.

(Contd. on page 9)
Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 3,5-Xylenol Standard (1X2 mL)
- **Part number:** WRK-170J
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- **Further information obtainable from:**
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

  - GHS02 flame
    Flam. Liq. 3  H226 Flammable liquid and vapour.

  - GHS07
    Acute Tox. 4  H312 Harmful in contact with skin.
    Skin Irrit. 2  H315 Causes skin irritation.
    Eye Irrit. 2  H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

  - GHS02
  - GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  p-xylene
  3,5-xylenol
- **Hazard statements**
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
Trade name: 3,5-Xylenol Standard (1X2 mL)

H315 Causes skin irritation.
H319 Causes serious eye irritation.

· Precautionary statements
  
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
  
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>203-396-5</td>
<td>p-xylene</td>
</tr>
<tr>
<td>108-68-9</td>
<td>203-606-5</td>
<td>3,5-xylenol</td>
</tr>
</tbody>
</table>

97.677%   2.323%

· Additional information: For the wording of the listed hazard phrases refer to section 16.
4 First aid measures

- **Description of first aid measures**
- **General information:**
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - Most important symptoms and effects, both acute and delayed No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** No special precautions are necessary if used correctly.
  - **Information about fire - and explosion protection:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

- Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WEL</th>
<th>Short-term value: 441 mg/m³, 100 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 220 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>Sk; BMGV</td>
<td></td>
</tr>
</tbody>
</table>

- Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGV 650 mmol/mol creatinine</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Sampling time: post shift</td>
</tr>
<tr>
<td>Parameter: methyl hippuric acid</td>
</tr>
</tbody>
</table>

- Additional information: The lists valid during the making were used as basis.

- Exposure controls

- Personal protective equipment:

  General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes and skin.

  Respiratory protection:
  When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- Protection of hands:
  Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- Material of gloves:
  For normal use: nitrile rubber, 11-13 mil thickness
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- Penetration time of glove material
  For normal use: nitrile rubber: 1 hour
  For direct contact with the chemical: butyl rubber: > 4 hours
### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td></td>
</tr>
<tr>
<td>Appearance:</td>
<td></td>
</tr>
<tr>
<td>Form:</td>
<td>Fluid</td>
</tr>
<tr>
<td>Colour:</td>
<td>According to product specification</td>
</tr>
<tr>
<td>Odour:</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>13.3 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>138 °C</td>
</tr>
<tr>
<td>Flash point:</td>
<td>25 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>525 °C</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td>Explosion limits:</td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>1.7 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
<td>7.6 Vol %</td>
</tr>
<tr>
<td>Vapour pressure at 20 °C:</td>
<td>9 hPa</td>
</tr>
<tr>
<td>Density at 20 °C:</td>
<td>0.86507 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water at 20 °C:</td>
<td>0.2 g/l</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td></td>
</tr>
<tr>
<td>Dynamic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solvent content:</td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>97.7 %</td>
</tr>
</tbody>
</table>
10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**: No further relevant information available.
- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity**: Harmful in contact with skin.

<table>
<thead>
<tr>
<th><strong>ATE (Acute Toxicity Estimates)</strong></th>
<th><strong>LD50</strong></th>
<th><strong>LC50/4 h</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>26,174 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>1,036 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>106-42-3 p-xylene</strong></th>
<th><strong>LD50</strong></th>
<th><strong>LC50/4 h</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,550 mg/L (rat)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>108-68-9 3,5-xylenol</strong></th>
<th><strong>LD50</strong></th>
<th><strong>LC50/4 h</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>608 mg/kg (rat)</td>
<td></td>
</tr>
</tbody>
</table>
12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability No further relevant information available.
· Behaviour in environmental systems:
· Bioaccumulative potential No further relevant information available.
· Mobility in soil No further relevant information available.
· Additional ecological information:
· General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
· Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· European waste catalogue
  HP 3  Flammable
  HP 4  Irritant - skin irritation and eye damage
  HP 6  Acute Toxicity
· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
  ADR, IMDG, IATA  UN1307
· UN proper shipping name
  ADR
  IMDG, IATA  1307 XYLENES
  XYLENES
· Transport hazard class(es)
  ADR, IMDG, IATA

· Class
  3 Flammable liquids.
· Label
  3
Trade name: 3,5-Xylenol Standard (1X2 mL)

- Packing group
  - ADR, IMDG, IATA
  - III

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Warning: Flammable liquids.

- Danger code (Kemler):
  - 30

- EMS Number:
  - F-E,S-E

- Stowage Category
  - A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- Transport/Additional information:
  - ADR
    - Limited quantities (LQ)
      - 5L, Code: E1
  
  Maximum net quantity per inner packaging: 30 ml
  Maximum net quantity per outer packaging: 1000 ml

  - Transport category
    - 3
  
  - Tunnel restriction code
    - D/E

- IMDG
  - Limited quantities (LQ)
    - 5L, Code: E1
  
  Maximum net quantity per inner packaging: 30 ml
  Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation":
  - UN 1307 XYLENES, 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture

  - Directive 2012/18/EU
  
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  
  - Seveso category P5c FLAMMABLE LIQUIDS
  
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  
  - H226 Flammable liquid and vapour.
  
  - H301 Toxic if swallowed.
  
  - H311 Toxic in contact with skin.
  
  - H312 Harmful in contact with skin.
  
  - H314 Causes severe skin burns and eye damage.
Trade name: 3,5-Xylenol Standard (1X2 mL)

H315 Causes skin irritation.
H332 Harmful if inhaled.

**Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: o-Ethylphenol Standard (1 x 2 mL)
- Part number: WRK-170K

Reagents and Standards for Analytical Chemical Laboratory Use

- Relevant identified uses of the substance or mixture and uses advised against
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany

- Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Liq. 3  H226 Flammable liquid and vapour.

GHS07

Acute Tox. 4  H312 Harmful in contact with skin.
Skin Irrit. 2  H315 Causes skin irritation.

- Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
- Hazard pictograms

GHS02  GHS07

- Signal word Warning
- Hazard-determining components of labelling:
  p-xylene
- Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
Trade name: o-Ethylphenol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233 Keep container tightly closed.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical/ventilating/lighting equipment.
  - P242 Use only non-sparking tools.
  - P243 Take precautionary measures against static discharge.
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P321 Specific treatment (see on this label).
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P370+P378 In case of fire: Use for extinguition: CO2, powder or water spray.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.

---

**3 Composition/information on ingredients**

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS: 106-42-3</th>
<th>EINECS: 203-396-5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-xylene</td>
<td></td>
<td></td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Flam. Liq. 3, H226, Acute Tox. 4, H312, Acute Tox. 4, H332, Skin Irrit. 2, H315</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

---

**4 First aid measures**

- **Description of first aid measures**
- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
Trade name: o-Ethylphenol Standard (1 x 2 mL)

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

(Contd. of page 2)
· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>WEL Short-term Value</th>
<th>Long-term Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

· Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>BMGV Limit Value</th>
<th>Medium</th>
<th>Sampling Time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

· Additional information: The lists valid during the making were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

· Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:

Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - **Form:** Fluid
  - **Colour:** According to product specification
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/freezing point:** 13.3 °C
  - **Initial boiling point and boiling range:** 138.7 °C

- **Flash point:** 25 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 525 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
  - **Lower:** 1.7 Vol %
  - **Upper:** 7.6 Vol %

- **Vapour pressure at 20 °C:** 9 hPa

- **Density at 20 °C:** 0.861 g/cm³

- **Relative density**
  - Not determined.

- **Vapour density**
  - Not determined.

- **Evaporation rate**
  - Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**
  - Dynamic at 20 °C: 0.648 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - **Organic solvents:** 100.0 %
  - **VOC (EC):** 100.00 %

- **Solids content:** 0.0 %

- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
    Harmful in contact with skin.
  - LD/LC50 values relevant for classification:
    | ATE (Acute Toxicity Estimates) |
    | Dermal | LD50 | 1,100 mg/kg |
  - 106-42-3 p-xylene
    | Oral | LD50 | 5,000 mg/kg (rat) |
    | Inhalative | LC50/4 h | 4,550 mg/L (rat) |
- Primary irritant effect:
  - Skin corrosion/irritation
    Causes skin irritation.
  - Serious eye damage/irritation
    Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation
  - CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity
    Based on available data, the classification criteria are not met.
  - Carcinogenicity
    Based on available data, the classification criteria are not met.
  - Reproductive toxicity
    Based on available data, the classification criteria are not met.
  - STOT-single exposure
    Based on available data, the classification criteria are not met.
  - STOT-repeated exposure
    Based on available data, the classification criteria are not met.
  - Aspiration hazard
    Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
  - Aquatic toxicity:
  No further relevant information available.
  - Persistence and degradability
  No further relevant information available.
  - Behaviour in environmental systems:
  - Bioaccumulative potential
  No further relevant information available.
  - Mobility in soil
  No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**
  - HP 3: Flammable
  - HP 4: Irritant - skin irritation and eye damage
  - HP 6: Acute Toxicity

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA: UN1307

- **UN proper shipping name**
  - ADR: 1307 XYLENES
  - IMDG, IATA: XYLENES

- **Transport hazard class(es)**
  - ADR, IMDG, IATA

- **Class**
  - 3: Flammable liquids.

- **Label**
  - 3

- **Packing group**
  - ADR, IMDG, IATA: III

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - Warning: Flammable liquids.

- **Danger code (Kemler):**
  - 30

- **EMS Number:**
  - F-E,S-E

- **Stowage Category**
  - A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - **ADR**
  - **Limited quantities (LQ)**: 5L
Trade name: o-Ethylphenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - Tunnel restriction code: D/E

- **IMDG**
  - **Limited quantities (LQ)**: 5L
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
  - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: m-Ethylphenol Standard (1 x 2 mL)
- Part number: WRK-170L
- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

- GHS02 flame
  Flam. Liq. 3  H226 Flammable liquid and vapour.

- GHS07
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.

- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.

- Hazard pictograms

- GHS02
- GHS07

- Signal word Warning

- Hazard-determining components of labelling:
  p-xylene

- Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

(Contd. on page 2)
Trade name: m-Ethylphenol Standard (1 x 2 mL)

- Precautionary statements
  - P101: If medical advice is needed, have product container or label at hand.
  - P102: Keep out of reach of children.
  - P103: Read label before use.
  - P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233: Keep container tightly closed.
  - P240: Ground/bond container and receiving equipment.
  - P241: Use explosion-proof electrical/ventilating/lighting equipment.
  - P242: Use only non-sparking tools.
  - P243: Take precautionary measures against static discharge.
  - P264: Wash thoroughly after handling.
  - P280: Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312: Call a POISON CENTER/doctor if you feel unwell.
  - P321: Specific treatment (see on this label).
  - P362+P364: Take off contaminated clothing and wash it before reuse.
  - P332+P313: If skin irritation occurs: Get medical advice/attention.
  - P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235: Store in a well-ventilated place. Keep cool.
  - P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>203-396-5</td>
<td>p-xylene Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information:
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.

(Contd. of page 1)

(Contd. of page 3)
5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Biological limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
</tr>
</tbody>
</table>

General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

Exposure controls

Respiratory protection:
- When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
- Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

Protection of hands:
- Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves:
- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material:
- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

Eye protection:
- Tightly sealed goggles
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Fluid
      - Colour: According to product specification
    - Odour: Characteristic
    - Odour threshold: Not determined.
  - pH-value: Not determined.
  - Change in condition
    - Melting point/freezing point: 13.3 °C
    - Initial boiling point and boiling range: 138.7 °C
  - Flash point: 25 °C
  - Flammability (solid, gas): Not applicable.
  - Ignition temperature: 525 °C
  - Decomposition temperature: Not determined.
  - Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  - Explosion limits:
    - Lower: 1.7 Vol %
    - Upper: 7.6 Vol %
  - Vapour pressure at 20 °C: 9 hPa
  - Density at 20 °C: 0.861 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not determined.
  - Evaporation rate: Not determined.
  - Solubility in / Miscibility with water at 20 °C: 0.2 g/l
  - Partition coefficient: n-octanol/water: Not determined.
  - Viscosity:
    - Dynamic at 20 °C: 0.648 mPas
    - Kinematic: Not determined.
  - Solvent content:
    - Organic solvents: 100.0 %
    - VOC (EC): 100.00 %
  - Solids content: 0.0 %
  - Other information No further relevant information available.

10 Stability and reactivity

- Reactivity No further relevant information available.
Safety data sheet  
according to 1907/2006/EC, Article 31

Trade name: m-Ethylphenol Standard (1 x 2 mL)

- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful in contact with skin.

- LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Dermal</th>
<th>LD50</th>
<th>1,100 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Oral</td>
<td>LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation
    Causes skin irritation.
  - Serious eye damage/irritation
    Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation
    Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity
    Based on available data, the classification criteria are not met.
  - Carcinogenicity
    Based on available data, the classification criteria are not met.
  - Reproductive toxicity
    Based on available data, the classification criteria are not met.
  - STOT-single exposure
    Based on available data, the classification criteria are not met.
  - STOT-repeated exposure
    Based on available data, the classification criteria are not met.
  - Aspiration hazard
    Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: m-Ethylphenol Standard (1 x 2 mL)

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
  · Recommendation
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue
  HP 3 Flammable
  HP 4 Irritant - skin irritation and eye damage
  HP 6 Acute Toxicity

· Uncleaned packaging:
  · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
  · ADR, IMDG, IATA
    UN1307

· UN proper shipping name
  · ADR
    1307 XYLENES
  · IMDG, IATA
    XYLENES

· Transport hazard class(es)
  · ADR, IMDG, IATA

  · Class
    3 Flammable liquids.
  · Label
    3

· Packing group
  · ADR, IMDG, IATA
    III

· Environmental hazards:
  · Not applicable.

· Special precautions for user
  · Warning: Flammable liquids.
  · Danger code (Kemler): 30
  · EMS Number: F-E,S-E
  · Stowage Category
    A

· Transport in bulk according to Annex II of Marpol and the IBC Code
  · Not applicable.

· Transport/Additional information:
  · Limited quantities (LQ)
    5L
Trade name: m-Ethylphenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - **Tunnel restriction code**
    - 3
    - D/E

- **IMDG**
  - **Limited quantities (LQ)**
    - 5L
  - **Excepted quantities (EQ)**
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** p-Ethylphenol Standard (1 x 2 mL)
- **Part number:** WRK-170M
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  **Manufacturer/Supplier:**
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- **Further information obtainable from:**
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
  **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
  **Classification according to Regulation (EC) No 1272/2008**

  - GHS02 flame
  - Flam. Liq. 3  H226 Flammable liquid and vapour.

  - GHS07
  - Acute Tox. 4  H312 Harmful in contact with skin.
  - Skin Irrit. 2  H315 Causes skin irritation.

- **Label elements**
  **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
  - GHS02
  - GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  p-xylene
- **Hazard statements**
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
Trade name: p-Ethylphenol Standard (1 x 2 mL)

- Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground/bond container and receiving equipment.
  P243 Take precautionary measures against static discharge.
  P260 Wash thoroughly after handling.
  P264 Wear protective gloves/protective clothing/eye protection/face protection.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P313 Specific treatment (see on this label).
  P360+P364 Take off contaminated clothing and wash it before reuse.
  P332+P333 If skin irritation occurs: Get medical advice/attention.
  P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P235 Store in a well-ventilated place. Keep cool.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

| CAS: 106-42-3 | 100.0% |
| EINECS: 203-396-5 |  |

- Dangerous components:
  - p-xylene
  - Flam. Liq. 3, H226
  - Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
Trade name: p-Ethylphenol Standard (1 x 2 mL)

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Biological limit value</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:
General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

Respiratory protection:
- When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
- Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

Protection of hands:
- Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves:
- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material:
- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

Eye protection:
- Tightly sealed goggles
### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>Form:</td>
<td>Fluid</td>
</tr>
<tr>
<td>Colour:</td>
<td>According to product specification</td>
</tr>
<tr>
<td>Odour:</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>13.3 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>138.7 °C</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>25 °C</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td>525 °C</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature:</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Explosive properties:</strong></td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>1.7 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
<td>7.6 Vol %</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C:</strong></td>
<td>9 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong></td>
<td>0.861 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water at 20 °C:</strong></td>
<td>0.2 g/l</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic at 20 °C:</td>
<td>0.648 mPas</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solvent content:</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td><strong>Solids content:</strong></td>
<td>0.0 %</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reactivity</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

(Contd. on page 6)
11 Toxicological information

- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:** No further relevant information available.
  - **Hazardous decomposition products:** No dangerous decomposition products known.

- **Acute toxicity**
  - Harmful in contact with skin.

- **LD/LC50 values relevant for classification:**
  - **ATE (Acute Toxicity Estimates)**
    - Dermal LD50 1,100 mg/kg
  - **106-42-3 p-xylene**
    - Oral LD50 5,000 mg/kg (rat)
    - Inhalative LC50/4 h 4,550 mg/L (rat)

- **Primary irritant effect:**
  - **Skin corrosion/irritation** Causes skin irritation.
  - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
  - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
  - **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
    - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
    - **Carcinogenicity** Based on available data, the classification criteria are not met.
    - **Reproductive toxicity** Based on available data, the classification criteria are not met.
    - **STOT-single exposure** Based on available data, the classification criteria are not met.
    - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
  - **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability** No further relevant information available.

- **Behaviour in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.

- **Additional ecological information:**
  - **General notes:**
    - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
    - Danger to drinking water if even small quantities leak into the ground.

- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
13 Disposal considerations

- Waste treatment methods
  - Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue
  
  | HP 3 | Flammable |
  | HP 4 | Irritant - skin irritation and eye damage |
  | HP 6 | Acute Toxicity |

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR, IMDG, IATA
  UN1307

- UN proper shipping name
  - ADR
  - IMDG, IATA
  1307 XYLENES
  XYLENES

- Transport hazard class(es)
  - ADR, IMDG, IATA

- Class
  3 Flammable liquids.

- Label
  3

- Packing group
  - ADR, IMDG, IATA
  III

- Environmental hazards:
  Not applicable.

- Special precautions for user
  Warning: Flammable liquids.

- Danger code (Kemler):
  30

- EMS Number:
  F-E,S-E

- Stowage Category
  A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  Not applicable.

- Transport/Additional information:

  - ADR
  - Limited quantities (LQ)
  5L
### 48.1.26

**Excepted quantities (EQ)**
- Code: E1
- Maximum net quantity per inner packaging: 30 ml
- Maximum net quantity per outer packaging: 1000 ml

**Transport category**
- Code: 3
- Tunnel restriction code: D/E

**IMDG**
- Limited quantities (LQ): 5L
- Excepted quantities (EQ)
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

**UN "Model Regulation":**
- UN 1307 XYLENES, 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
  - **Seveso category** P5c FLAMMABLE LIQUIDS
  - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
  - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
  - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
  - **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 2-Isopropylphenol Standard (1 x 2 mL)
- **Part number:** WRK-170N
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies Manufacturing GmbH & Co. KG
    Hewlett-Packard-Str.8
    76337 Waldbronn
    Germany
  - **Further information obtainable from:**
    - Telephone: 0800 603 1000
    - pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

- **Label elements**
  - **Hazard pictograms**
    - GHS02 flame
    - GHS07

- **Hazard-determining components of labelling:**
  - p-xylene
- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.

(Contd. on page 2)
3 Composition/information on ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>CAS: 106-42-3</th>
<th>p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 203-396-5</td>
<td>☑ Flam. Liq. 3, H226; ☑ Acute Tox. 4, H312; ☑ Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
</tr>
</tbody>
</table>

**Dangerous components:**

<table>
<thead>
<tr>
<th>Component</th>
<th>H315</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
48.1.26

· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Limit values</th>
<th>Monitoring parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL</td>
<td>Short-term value: 441 mg/m³, 100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term value: 220 mg/m³, 50 ppm</td>
<td></td>
</tr>
<tr>
<td>Sk; BMGV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

· Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Limit values</th>
<th>Monitoring parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMGV</td>
<td>650 mmol/mol creatinine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium: urine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sampling time: post shift</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parameter: methyl hippuric acid</td>
<td></td>
</tr>
</tbody>
</table>

· Additional information: The lists valid during the making were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

  Keep away from foodstuffs, beverages and feed.  
  Immediately remove all soiled and contaminated clothing  
  Wash hands before breaks and at the end of work.  
  Avoid contact with the skin.  
  Avoid contact with the eyes and skin.

· Respiratory protection:

  When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.  
  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· Protection of hands:

  Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

  For normal use: nitrile rubber, 11-13 mil thickness  
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

  For normal use: nitrile rubber: 1 hour  
  For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:

  Tightly sealed goggles
## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - Form: Fluid
    - Colour: According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - Melting point/freezing point: 13.3 °C
  - Initial boiling point and boiling range: 138.7 °C
- **Flash point:** 25 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 525 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**
  - Lower: 1.7 Vol %
  - Upper: 7.6 Vol %
- **Vapour pressure at 20 °C:** 9 hPa
- **Density at 20 °C:** 0.861 g/cm³
- **Relative density:** Not determined.
- **Vapour density**
  - Not determined.
- **Evaporation rate**
  - Not determined.
- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - Dynamic at 20 °C: 0.648 mPa s
  - Kinematic: Not determined.
- **Solvent content:**
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %
- **Solids content:** 0.0 %
- **Other information**
  - No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
### Chemical stability
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### Toxicological information

#### Information on toxicological effects

- **Acute toxicity**
  - Harmful in contact with skin.

#### LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Dermal LD50</th>
<th>1,100 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Oral LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

#### Primary irritant effect:

- **Skin corrosion/irritation**
  - Causes skin irritation.
- **Serious eye damage/irritation**
  - Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**
  - Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity**
    - Based on available data, the classification criteria are not met.
  - **Carcinogenicity**
    - Based on available data, the classification criteria are not met.
  - **Reproductive toxicity**
    - Based on available data, the classification criteria are not met.
  - **STOT-single exposure**
    - Based on available data, the classification criteria are not met.
  - **STOT-repeated exposure**
    - Based on available data, the classification criteria are not met.
  - **Aspiration hazard**
    - Based on available data, the classification criteria are not met.

### Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability**
  - No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential**
  - No further relevant information available.
- **Mobility in soil**
  - No further relevant information available.
- **Additional ecological information:**
  - **General notes:**
    - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
    - Danger to drinking water if even small quantities leak into the ground.
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

<table>
<thead>
<tr>
<th>European waste catalogue</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 3 Flammable</td>
</tr>
<tr>
<td>HP 4 Irritant - skin irritation and eye damage</td>
</tr>
<tr>
<td>HP 6 Acute Toxicity</td>
</tr>
</tbody>
</table>

- **Uncleaned packaging**:
  - **Recommendation**: Disposal must be made according to official regulations.

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>ADR, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1307</td>
<td></td>
</tr>
</tbody>
</table>

- **UN proper shipping name**
  - **ADR**: 1307 XYLENES
  - **IMDG, IATA**: XYLENES

- **Transport hazard class(es)**
  - **ADR, IMDG, IATA**:
    - **Class**: 3 Flammable liquids.
    - **Label**: 3
    - **Packing group**: III
    - **Environmental hazards**: Not applicable.
    - **Special precautions for user**: Warning: Flammable liquids.
    - **Danger code (Kemler)**: 30
    - **EMS Number**: F-E,S-E
    - **Stowage Category**: A
    - **Transport in bulk according to Annex II of Marpol and the IBC Code**: Not applicable.
    - **Transport/Additional information**: ADR
    - **Limited quantities (LQ)**: 5L
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.04.2019
Version number 1
Revision: 31.03.2019

Trade name: 2-Isopropylphenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - Tunnel restriction code: 3
    - D/E

- **IMDG**
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ)
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category: P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements: 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements: 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
# 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 2-n-Propylphenol Standard (1 x 2 mL)
- **Part number:** WRK-1700
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  **Manufacturer/Supplier:**
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str. 8
  76337 Waldbronn
  Germany
- **Further information obtainable from:**
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
  **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

# 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - GHS02 flame
    Flam. Liq. 3  H226 Flammable liquid and vapour.
  - GHS07
    Acute Tox. 4  H312 Harmful in contact with skin.
    Skin Irrit. 2  H315 Causes skin irritation.
- **Label elements**
  **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
  - GHS02
  - GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
  p-xylene
- **Hazard statements**
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
Trade name: 2-n-Propylphenol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233 Keep container tightly closed.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical/ventilating/lighting equipment.
  - P242 Use only non-sparking tools.
  - P243 Take precautionary measures against static discharge.
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 If ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P321 Specific treatment (see on this label).
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
  - **PBT**: Not applicable.
  - **vPvB**: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation**: Mixtures
- **Description**: Mixture of substances listed below with nonhazardous additions.

#### Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 106-42-3</th>
<th>EINECS: 203-396-5</th>
<th>p-xylene</th>
<th>100.0%</th>
</tr>
</thead>
</table>

- **Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315 |

- **Additional information**: For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information:**
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation**: In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact**: Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**: Rinse opened eye for several minutes under running water.
- **After swallowing**: If symptoms persist consult doctor.
- **Information for doctor**:
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
Trade name: 2-n-Propylphenol Standard (1 x 2 mL)

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** No special precautions are necessary if used correctly.
  - **Information about fire - and explosion protection:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Keep container tightly sealed.
  - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Short-term Value</th>
<th>Long-term Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

Sk; BMGV

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Limit Value</th>
<th>Medium</th>
<th>Sampling Time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves:

- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material:

- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

Eye protection:

Tightly sealed goggles
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Fluid
      - Colour: According to product specification
    - Odour:
      - Characteristic
    - Odour threshold:
      - Not determined.
  - pH-value:
    - Not determined.
- Change in condition
  - Melting point/freezing point: 13.3 °C
  - Initial boiling point and boiling range: 138.7 °C
- Flash point: 25 °C
- Flammability (solid, gas):
  - Not applicable.
- Ignition temperature:
  - 525 °C
- Decomposition temperature:
  - Not determined.
- Auto-ignition temperature:
  - Product is not selfigniting.
- Explosive properties:
  - Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Explosion limits:
  - Lower: 1.7 Vol %
  - Upper: 7.6 Vol %
- Vapour pressure at 20 °C:
  - 9 hPa
- Density at 20 °C:
  - 0.861 g/cm³
- Relative density:
  - Not determined.
- Vapour density:
  - Not determined.
- Evaporation rate:
  - Not determined.
- Solubility in / Miscibility with water at 20 °C:
  - 0.2 g/l
- Partition coefficient: n-octanol/water:
  - Not determined.
- Viscosity:
  - Dynamic at 20 °C:
    - 0.648 mPas
  - Kinematic:
    - Not determined.
- Solvent content:
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %
- Solids content:
  - 0.0 %
- Other information:
  - No further relevant information available.

10 Stability and reactivity

- Reactivity:
  - No further relevant information available.
· Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions No dangerous reactions known.
· Conditions to avoid No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects
· Acute toxicity
  Harmful in contact with skin.

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Dermal LD50</th>
<th>1,100 mg/kg</th>
</tr>
</thead>
</table>

106-42-3 p-xylene

<table>
<thead>
<tr>
<th></th>
<th>Oral LD50</th>
<th>5,000 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inhalative LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

· Primary irritant effect:
· Skin corrosion/irritation
  Causes skin irritation.
· Serious eye damage/irritation Based on available data, the classification criteria are not met.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
· Germ cell mutagenicity Based on available data, the classification criteria are not met.
· Carcinogenicity Based on available data, the classification criteria are not met.
· Reproductive toxicity Based on available data, the classification criteria are not met.
· STOT-single exposure Based on available data, the classification criteria are not met.
· STOT-repeated exposure Based on available data, the classification criteria are not met.
· Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability No further relevant information available.
· Behaviour in environmental systems:
· Bioaccumulative potential No further relevant information available.
· Mobility in soil No further relevant information available.
· Additional ecological information:
· General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
13 Disposal considerations

- Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

13.1 European waste catalogue

- HP 3 Flammable
- HP 4 Irritant - skin irritation and eye damage
- HP 6 Acute Toxicity

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR, IMDG, IATA UN1307
- UN proper shipping name
  - ADR 1307 XYLENES
  - IMDG, IATA XYLENES

- Transport hazard class(es)
  - ADR, IMDG, IATA

- Class 3 Flammable liquids.
- Label 3

- Packing group
  - ADR, IMDG, IATA III

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Warning: Flammable liquids.
- Danger code (Kemler): 30
- EMS Number: F-E,S-E
- Stowage Category A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- Transport/Additional information:
  - ADR
  - Limited quantities (LQ) 5L
Trade name: 2-n-Propylphenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - Tunnel restriction code
  - 3
  - D/E

- **IMDG**
- **Limited quantities (LQ)**
  - 5L
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

· Product identifier
· Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)
· Part number: WRK-170P
· Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
· Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
· Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

· Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008

  GHS02 flame
  Flam. Liq. 3  H226 Flammable liquid and vapour.

  GHS07
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.

· Label elements
· Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
· Hazard pictograms

  GHS02  GHS07

· Signal word Warning
· Hazard-determining components of labelling:
  p-xylene
· Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

(Contd. on page 2)
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233 Keep container tightly closed.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical/ventilating/lighting equipment.
  - P242 Use only non-sparking tools.
  - P243 Take precautionary measures against static discharge.
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P321 Specific treatment (see on this label).
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/ regional/national/international regulations.

- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

| CAS: 106-42-3 | p-xylene |
| EINECS: 203-396-5 | Flam. Liq. 3, H226 | Acute Tox. 4, H312 | Acute Tox. 4, H332 | Skin Irrit. 2, H315 |

100.0%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special precautions are necessary if used correctly.
  - Information about fire - and explosion protection:
    Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

- Control parameters

  - Ingredients with limit values that require monitoring at the workplace:

    | 106-42-3 p-xylene |
    |-------------------|
    | WEL Short-term value: 441 mg/m³, 100 ppm |
    | Long-term value: 220 mg/m³, 50 ppm |
    | Sk; BMGV |

  - Ingredients with biological limit values:

    | 106-42-3 p-xylene |
    |-------------------|
    | BMGV 650 mmol/mol creatinine |
    | Medium: urine |
    | Sampling time: post shift |
    | Parameter: methyl hippuric acid |

- Additional information: The lists valid during the making were used as basis.

- Exposure controls

  - Personal protective equipment:

    - General protective and hygienic measures:
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing
      - Wash hands before breaks and at the end of work.
      - Avoid contact with the skin.
      - Avoid contact with the eyes and skin.

  - Respiratory protection:
    - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
    - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

  - Protection of hands:
    - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

  - Material of gloves
    - For normal use: nitrile rubber, 11-13 mil thickness
    - For direct contact with the chemical: butyl rubber, 12-15 mil thickness

  - Penetration time of glove material
    - For normal use: nitrile rubber: 1 hour
    - For direct contact with the chemical: butyl rubber: > 4 hours

- Eye protection:

  Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - **Form:** Fluid
    - **Colour:** According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - **Melting point/freezing point:** 13.3 °C
  - **Initial boiling point and boiling range:** 138.7 °C
- **Flash point:** 25 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 525 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**
  - **Lower:** 1.7 Vol %
  - **Upper:** 7.6 Vol %
- **Vapour pressure at 20 °C:** 9 hPa
- **Density at 20 °C:** 0.861 g/cm³
- **Relative density**
- **Vapour density**
- **Evaporation rate**
- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - **Dynamic at 20 °C:** 0.648 mPas
  - **Kinematic:** Not determined.
- **Solvent content:**
  - **Organic solvents:** 100.0 %
  - **VOC (EC):** 100.00 %
- **Solids content:** 0.0 %
- **Other information** No further relevant information available.

### 10 Stability and reactivity
- **Reactivity** No further relevant information available.
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

· Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions: No dangerous reactions known.
· Conditions to avoid: No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects
· Acute toxicity
  Harmful in contact with skin.
· LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Dermal</th>
<th>LD50</th>
<th>1,100 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>Oral</td>
<td>LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

· Primary irritant effect:
· Skin corrosion/irritation
  Causes skin irritation.
· Serious eye damage/irritation
  Based on available data, the classification criteria are not met.
· Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
· Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
· Carcinogenicity
  Based on available data, the classification criteria are not met.
· Reproductive toxicity
  Based on available data, the classification criteria are not met.
· STOT-single exposure
  Based on available data, the classification criteria are not met.
· STOT-repeated exposure
  Based on available data, the classification criteria are not met.
· Aspiration hazard
  Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability: No further relevant information available.
· Behaviour in environmental systems:
· Bioaccumulative potential: No further relevant information available.
· Mobility in soil: No further relevant information available.
· Additional ecological information:
· General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

- Other adverse effects: No further relevant information available.

### 13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue
  - HP 3 Flammable
  - HP 4 Irritant - skin irritation and eye damage
  - HP 6 Acute Toxicity

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

### 14 Transport information

- UN-Number
  - ADR, IMDG, IATA: UN1307

- UN proper shipping name
  - ADR
  - IMDG, IATA: 1307 XYLENES mixture

- Transport hazard class(es)
  - ADR, IMDG, IATA
    - Class: 3 Flammable liquids.
    - Label: 3
  - Packing group
    - ADR, IMDG, IATA: III

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Warning: Flammable liquids.

- Danger code (Kemler):
  - 30

- EMS Number:
  - F-E,S-D

- Stowage Category:
  - A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- Transport/Additional information:
  - Limited quantities (LQ): 5L

(Contd. on page 8)
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - 3
  - Tunnel restriction code: D/E

- **IMDG**
  - Limited quantities (LQ)
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES MIXTURE, 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I: None of the ingredients is listed.
  - Seveso category: P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements: 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements: 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII
  - Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 2,4,6-Trimethylphenol Standard (1 x 2 mL)
- **Part number:** WRK-170Q
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- **Further information obtainable from:**
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
  **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

  - GHS02 flame
  Flam. Liq. 3  H226 Flammable liquid and vapour.

  - GHS07
  Acute Tox. 4  H312 Harmful in contact with skin.
  Skin Irrit. 2  H315 Causes skin irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

  - GHS02
  - GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  p-xylene
- **Hazard statements**
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.

(Contd. on page 2)
Trade name: 2,4,6-Trimethylphenol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233 Keep container tightly closed.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical/ventilating/lighting equipment.
  - P242 Use only non-sparking tools.
  - P243 Take precautionary measures against static discharge.
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P321 Specific treatment (see on this label).
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

#### Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 106-42-3</th>
<th>p-xylene</th>
<th>100.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 203-396-5</td>
<td>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** No special precautions are necessary if used correctly.
  - **Information about fire - and explosion protection:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
  - **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** Keep container tightly sealed.
  - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 4)
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>WEL Short-term Value</th>
<th>Long-term Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>BMGV 650 mmol/mol creatinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td></td>
</tr>
</tbody>
</table>

Medium: urine
Sampling time: post shift
Parameter: methyl hippuric acid

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

Eye protection:

Tightly sealed goggles
### 9 Physical and chemical properties

- **Appearance:**
  - **Form:** Fluid
  - **Colour:** According to product specification
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/freezing point:** 13.3 °C
  - **Initial boiling point and boiling range:** 138.7 °C
- **Flash point:** 25 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 525 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:**
  - Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  - **Explosion limits:**
    - **Lower:** 1.7 Vol %
    - **Upper:** 7.6 Vol %
  - **Vapour pressure at 20 °C:** 9 hPa
  - **Density at 20 °C:** 0.861 g/cm³
  - **Relative density**
  - **Vapour density**
  - **Evaporation rate**
  - **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l
  - **Partition coefficient: n-octanol/water:** Not determined.
  - **Viscosity:**
    - **Dynamic at 20 °C:** 0.648 mPas
    - **Kinematic:** Not determined.
  - **Solvent content:**
    - **Organic solvents:** 100.0 %
    - **VOC (EC) 100.00 %**
  - **Solids content:** 0.0 %
  - **Other information**
    - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
### 11 Toxicological information

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

#### 11.1 Acute toxicity

**106-42-3 p-xylene**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>1,100 mg/kg</td>
<td>4,550 mg/L (rat)</td>
</tr>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 11.2 Skin corrosion/irritation

- Causes skin irritation.

#### 11.3 Respiratory or skin sensitisation

- Based on available data, the classification criteria are not met.

#### 11.4 Germ cell mutagenicity

- Based on available data, the classification criteria are not met.

#### 11.5 Carcinogenicity

- Based on available data, the classification criteria are not met.

#### 11.6 Reproductive toxicity

- Based on available data, the classification criteria are not met.

#### 11.7 STOT-single exposure

- Based on available data, the classification criteria are not met.

#### 11.8 STOT-repeated exposure

- Based on available data, the classification criteria are not met.

#### 11.9 Aspiration hazard

- Based on available data, the classification criteria are not met.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
  - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  - Do not allow product to reach ground water, water course or sewage system.
  - Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**European waste catalogue**
- HP 3 Flammable
- HP 4 Irritant - skin irritation and eye damage
- HP 6 Acute Toxicity

- **Uncleaned packaging**:
  - **Recommendation**: Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA: UN1307

- **UN proper shipping name**
  - ADR 1307 XYLENES mixture
  - IMDG, IATA XYLENES mixture

- **Transport hazard class(es)**
  - ADR, IMDG, IATA: 3 Flammable liquids.

- **Packing group**
  - ADR, IMDG, IATA: III

- **Environmental hazards**: Not applicable.

- **Special precautions for user**
  - Warning: Flammable liquids.

- **Danger code (Kemler)**: 30

- **EMS Number**: F-E,S-D

- **Stowage Category**: A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**: Not applicable.

- **Transport/Additional information**
  - **ADR**
  - **Limited quantities (LQ)**: 5L

(Contd. on page 8)
Trade name: 2,4,6-Trimethylphenol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>· Excepted quantities (EQ)</th>
<th>Code: E1</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Maximum net quantity per inner packaging: 30 ml</td>
<td></td>
</tr>
<tr>
<td>· Maximum net quantity per outer packaging: 1000 ml</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>· Transport category</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Tunnel restriction code</td>
<td>D/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>· IMDG</th>
<th>5L</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Limited quantities (LQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>· Excepted quantities (EQ)</td>
<td></td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
<td></td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
<td></td>
</tr>
</tbody>
</table>

| · UN "Model Regulation": | UN 1307 XYLENES MIXTURE, 3, III |

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Directive 2012/18/EU
    · Named dangerous substances - ANNEX I None of the ingredients is listed.
  · Seveso category P5c FLAMMABLE LIQUIDS
  · Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  · Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
  H332 Harmful if inhaled.

· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 4-Tert-Butylphenol Standard (1 x 2 mL)
- **Part number:** WRK-170R
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    Agilent Technologies Manufacturing GmbH & Co. KG
    Hewlett-Packard-Str.8
    76337 Waldbronn
    Germany
- **Further information obtainable from:**
  * Telephone: 0800 603 1000
  * pdl-msds_author@agilent.com
  * **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - GHS02 flame
    - Flam. Liq. 3  H226  Flammable liquid and vapour.
  - GHS07
    - Acute Tox. 4  H312  Harmful in contact with skin.
    - Skin Irrit. 2  H315  Causes skin irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
  The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
  - GHS02
  - GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  p-xylene
- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.

(Contd. on page 2)
Trade name: 4-Tert-Butylphenol Standard (1 x 2 mL)

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233 Keep container tightly closed.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical/ventilating/lighting equipment.
  - P242 Use only non-sparking tools.
  - P243 Take precautionary measures against static discharge.
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P321 Specific treatment (see on this label).
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 106-42-3</td>
</tr>
<tr>
<td>EINECS: 203-396-5</td>
</tr>
<tr>
<td>p-xylene</td>
</tr>
<tr>
<td>Flam. Liq. 3, H226,</td>
</tr>
<tr>
<td>Acute Tox. 4, H312;</td>
</tr>
<tr>
<td>Acute Tox. 4, H332;</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>100.0%</td>
</tr>
</tbody>
</table>

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
  - **General information:** Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.
  - **Information for doctor:** Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 3)
5 Firefighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet

- Special hazards arising from the substance or mixture: No further relevant information available.

- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.

- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.

- Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.

- Information about fire - and explosion protection:
  - Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.

- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
Trade name: 4-Tert-Butylphenol Standard (1 x 2 mL)

**Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

**Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Limit value</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

**Additional information:** The lists valid during the making were used as basis.

**Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

**Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

**Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

**Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

**Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

**Eye protection:**

Tightly sealed goggles
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Fluid
    - Colour: According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - Melting point/freezing point: 13.3 °C
    - Initial boiling point and boiling range: 138.7 °C
  - **Flash point:** 25 °C
  - **Flammability (solid, gas):** Not applicable.
  - **Ignition temperature:** 525 °C
  - **Decomposition temperature:** Not determined.
  - **Auto-ignition temperature:** Product is not selfigniting.
  - **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  - **Explosion limits:**
    - Lower: 1.7 Vol %
    - Upper: 7.6 Vol %
  - **Vapour pressure at 20 °C:** 9 hPa
  - **Density at 20 °C:** 0.861 g/cm³
  - **Relative density**
  - **Vapour density** Not determined.
  - **Evaporation rate** Not determined.
  - **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l
  - **Partition coefficient: n-octanol/water:** Not determined.
  - **Viscosity:**
    - Dynamic at 20 °C: 0.648 mPas
    - Kinematic: Not determined.
  - **Solvent content:**
    - Organic solvents: 100.0 %
    - VOC (EC) 100.00 %
  - **Solids content:** 0.0 %
  - **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
11 Toxicological information

Information on toxicological effects

Acute toxicity
Harmful in contact with skin.

LD/LC₅₀ values relevant for classification:

ATE (Acute Toxicity Estimates)

<table>
<thead>
<tr>
<th>Route</th>
<th>LD₅₀</th>
<th>LC₅₀/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>1,100 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

<table>
<thead>
<tr>
<th>Route</th>
<th>LD₅₀</th>
<th>LC₅₀/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,550 mg/L (rat)</td>
<td></td>
</tr>
</tbody>
</table>

Primary irritant effect:

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability
No further relevant information available.

Behaviour in environmental systems:

Bioaccumulative potential
No further relevant information available.

Mobility in soil
No further relevant information available.

Additional ecological information:

General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.
13 Disposal considerations

- Waste treatment methods
  - Recommendation
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue
  - HP 3 Flammable
  - HP 4 Irritant - skin irritation and eye damage
  - HP 6 Acute Toxicity

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR, IMDG, IATA
  - UN1307

- UN proper shipping name
  - ADR
  - IMDG, IATA
  - 1307 XYLENES
  - XYLENES

- Transport hazard class(es)
  - ADR, IMDG, IATA

- Class
  - 3 Flammable liquids.

- Label
  - 3

- Packing group
  - ADR, IMDG, IATA
  - III

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Warning: Flammable liquids.
  - 30

- EMS Number
  - F-E,S-E

- Stowage Category
  - A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- Transport/Additional information:
  - ADR
  - Limited quantities (LQ)
  - 5L

(Contd. on page 6)
Trade name: 4-Tert-Butylphenol Standard (1 x 2 mL)

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **Transport category**
  - 3
  - Tunnel restriction code
  - D/E

- **IMDG**
  - Limited quantities (LQ): 5L
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**
  - UN 1307 XYLENES, 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Directive 2012/18/EU**
    - Named dangerous substances - ANNEX I: None of the ingredients is listed.
  - **Seveso category**: P5c FLAMMABLE LIQUIDS
  - **Qualifying quantity (tonnes) for the application of lower-tier requirements**: 5,000 t
  - **Qualifying quantity (tonnes) for the application of upper-tier requirements**: 50,000 t
  - **REGULATION (EC) No 1907/2006 ANNEX XVII**: Conditions of restriction: 3
  - **Chemical safety assessment**: A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: 1-Naphthol Standard (1X2 mL)
- Part number: WRK-170S
- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany
- Further information obtainable from:
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  GHS02 flame
  Flam. Liq. 3 H226 Flammable liquid and vapour.
  ! GHS07
  Acute Tox. 4 H312 Harmful in contact with skin.
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2 H319 Causes serious eye irritation.
- Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
- Hazard pictograms

GHS02  GHS07
- Signal word Warning
- Hazard-determining components of labelling:
  p-xylene
  1-naphthol
- Hazard statements
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.

(Contd. on page 2)
48.1.26

H315 Causes skin irritation.
H319 Causes serious eye irritation.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 106-42-3</th>
<th>p-xylene</th>
<th>97.677%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 203-396-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>✔ Flam. Liq. 3, H226; ❇ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 90-15-3</th>
<th>1-naphthol</th>
<th>2.323%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 201-969-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>❇ Eye Dam. 1, H318; ❇ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; STOT SE 3, H335</td>
<td></td>
</tr>
</tbody>
</table>

· Additional information: For the wording of the listed hazard phrases refer to section 16.
4 First aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours
  after the accident.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  Most important symptoms and effects, both acute and delayed No further relevant information available.
  Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  For safety reasons unsuitable extinguishing agents: Water with full jet
  Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
Trade name: 1-Naphthol Standard (1X2 mL)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Keep container tightly sealed.
  - **Specific end use(s)** No further relevant information available.

---

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Control parameters**
  - **Ingredients with limit values that require monitoring at the workplace:**
    - **106-42-3 p-xylene**
      - WEL Short-term value: 441 mg/m³, 100 ppm
      - Long-term value: 220 mg/m³, 50 ppm
    - Sk; BMGV
  - **Ingredients with biological limit values:**
    - **106-42-3 p-xylene**
      - BMGV 650 mmol/mol creatinine
      - Medium: urine
      - Sampling time: post shift
      - Parameter: methyl hippuric acid

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing
      - Wash hands before breaks and at the end of work.
      - Avoid contact with the eyes and skin.
    - **Respiratory protection:**
      - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
      - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
  - **Protection of hands:**
    - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
  - **Material of gloves**
    - For normal use: nitrile rubber, 11-13 mil thickness
    - For direct contact with the chemical: butyl rubber, 12-15 mil thickness
  - **Penetration time of glove material**
    - For normal use: nitrile rubber: 1 hour
    - For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)
9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Fluid
  - Colour: According to product specification
- Odour:
  - Odour: Characteristic
  - Odour threshold: Not determined.
- pH-value: Not determined.

- Change in condition
  - Melting point/freezing point: 13.3 °C
  - Initial boiling point and boiling range: 138.7 °C
- Flash point: 25 °C
- Flammability (solid, gas): Not applicable.
- Ignition temperature: 525 °C
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Explosion limits:
  - Lower: 1.7 Vol %
  - Upper: 7.6 Vol %
- Vapour pressure at 20 °C: 9 hPa
- Density at 20 °C: 0.86644 g/cm³
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with water at 20 °C: 0.2 g/l
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:
  - Dynamic at 20 °C: 0.648 mPas
  - Kinematic: Not determined.
- Solvent content:
  - Organic solvents: 97.7 %
Trade name: 1-Naphthol Standard (1X2 mL)

VOC (EC) | 97.68 %
Solids content: | 2.3 %
Other information | No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful in contact with skin.
- LD/LC50 values relevant for classification:
  ATE (Acute Toxicity Estimates)
  Oral LD50 80,503 mg/kg (rat)
  Dermal LD50 1,094 mg/kg
  106-42-3 p-xylene
  Oral LD50 5,000 mg/kg (rat)
  Inhalative LC50/4 h 4,550 mg/L (rat)
  90-15-3 1-naphthol
  Oral LD50 1,870 mg/kg (rat)
  Dermal LD50 880 mg/kg (rabbit)

- Primary irritant effect:
- Skin corrosion/irritation
  Causes skin irritation.
- Serious eye damage/irritation
  Causes serious eye irritation.
- Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
- Carcinogenicity
  Based on available data, the classification criteria are not met.
- Reproductive toxicity
  Based on available data, the classification criteria are not met.
- STOT-single exposure
  Based on available data, the classification criteria are not met.
- STOT-repeated exposure
  Based on available data, the classification criteria are not met.
- Aspiration hazard
  Based on available data, the classification criteria are not met.
12 Ecological information

- **Toxicity**
  - *Aquatic toxicity*: No further relevant information available.
  - *Persistence and degradability*: No further relevant information available.
  - *Behaviour in environmental systems*:
    - *Bioaccumulative potential*: No further relevant information available.
    - *Mobility in soil*: No further relevant information available.
  - *Additional ecological information*:
    - *General notes*:
      - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
      - Do not allow product to reach ground water, water course or sewage system.
      - Danger to drinking water if even small quantities leak into the ground.
  - *Results of PBT and vPvB assessment*
    - *PBT*: Not applicable.
    - *vPvB*: Not applicable.
    - *Other adverse effects*: No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
  - Must not be disposed together with household garbage. Do not allow product to reach sewage system.

<table>
<thead>
<tr>
<th>European waste catalogue</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 3</td>
</tr>
<tr>
<td>HP 4</td>
</tr>
<tr>
<td>HP 6</td>
</tr>
</tbody>
</table>

- **Uncleaned packaging**:
- **Recommendation**: Disposal must be made according to official regulations.

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>UN1993</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADR, IMDG, IATA</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADR</strong></td>
</tr>
<tr>
<td><strong>IMDG, IATA</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADR, IMDG, IATA</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>3 Flammable liquids.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>3</td>
</tr>
</tbody>
</table>
### Trade name: 1-Naphthol Standard (1X2 mL)

<table>
<thead>
<tr>
<th>Packing group</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental hazards:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Warning: Flammable liquids.</td>
</tr>
<tr>
<td>Danger code (Kemler):</td>
<td>30</td>
</tr>
<tr>
<td>EMS Number:</td>
<td>F-E,S-E</td>
</tr>
<tr>
<td>Stowage Category</td>
<td>A</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of Marpol and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td></td>
</tr>
<tr>
<td>ADR</td>
<td></td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>5L</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging:</td>
<td>30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging:</td>
<td>1000 ml</td>
</tr>
<tr>
<td>Transport category</td>
<td>3</td>
</tr>
<tr>
<td>Tunnel restriction code</td>
<td>D/E</td>
</tr>
<tr>
<td>IMDG</td>
<td></td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>5L</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging:</td>
<td>30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging:</td>
<td>1000 ml</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>UN 1993 FLAMMABLE LIQUID, N.O.S. (XYLENES), 3, III</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  - H226 Flammable liquid and vapour.
  - H302 Harmful if swallowed.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 2-Naphthol Standard (1 x 2 mL)
- **Part number:** WRK-170T
- **Relevant identified uses of the substance or mixture and uses advised against**
  Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    Agilent Technologies Manufacturing GmbH & Co. KG
    Hewlett-Packard-Str.8
    76337 Waldbronn
    Germany
- **Further information obtainable from:**
  - Telephone: 0800 603 1000
  - pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

  - **GHS02 flame**
  - Flam. Liq. 3  H226 Flammable liquid and vapour.
  - **GHS07**
  - Acute Tox. 4  H312 Harmful in contact with skin.
  - Skin Irrit. 2  H315 Causes skin irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

  - **GHS02**
  - **GHS07**

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  - p-xylene
- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
Trade name: 2-Naphthol Standard (1 x 2 mL)

- Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground/bond container and receiving equipment.
  P241 Use explosion-proof electrical/ventilating/lighting equipment.
  P242 Use only non-sparking tools.
  P243 Take precautionary measures against static discharge.
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P235 Store in a well-ventilated place. Keep cool.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:
  - CAS: 106-42-3
  - EINECS: 203-396-5
  - p-xylene
  - Flam. Liq. 3, H226: Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315
  - 100.0%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed No further relevant information available.
Trade name: 2-Naphthol Standard (1 x 2 mL)

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents:
  Water with full jet
- Special hazards arising from the substance or mixture
  No further relevant information available.
- Advice for firefighters
- Protective equipment:
  No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling
  No special precautions are necessary if used correctly.
- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles
  No special requirements.
- Information about storage in one common storage facility:
  Not required.
- Further information about storage conditions:
  Keep container tightly sealed.
- Specific end use(s)
  No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities:
  No further data; see item 7.
### Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>441 mg/m³, 100 ppm</td>
<td>220 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

#### Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Limit value</th>
<th>Medium</th>
<th>Sampling time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>650 mmol/mol creatinine</td>
<td>urine</td>
<td>post shift</td>
<td>methyl hippuric acid</td>
</tr>
</tbody>
</table>

#### Additional information:
The lists valid during the making were used as basis.

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

#### Respiratory protection:
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

#### Protection of hands:
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

#### Material of gloves
- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

#### Penetration time of glove material
- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: > 4 hours

#### Eye protection:
- Tightly sealed goggles

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(Contd. on page 5)
## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Fluid
    - Colour: According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/freezing point:** 13.3 °C
  - **Initial boiling point and boiling range:** 138.7 °C

- **Flash point:** 25 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 525 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:**
  - Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
  - Lower: 1.7 Vol %
  - Upper: 7.6 Vol %

- **Vapour pressure at 20 °C:** 9 hPa

- **Density at 20 °C:** 0.861 g/cm³
  - **Relative density:** Not determined.
  - **Vapour density** Not determined.
  - **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 0.2 g/l

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**
  - Dynamic at 20 °C: 0.648 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 100.0 %
  - VOC (EC): 100.00 %

- **Solids content:** 0.0 %

- **Other information**
  - No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects
- Acute toxicity
  Harmful in contact with skin.

LD/LC50 values relevant for classification:

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>LD50</td>
<td>1,100 mg/kg</td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

<p>| | | |</p>
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<thead>
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<tbody>
<tr>
<td></td>
<td>LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
- Skin corrosion/irritation
  Causes skin irritation.
- Serious eye damage/irritation
  Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
- Carcinogenicity
  Based on available data, the classification criteria are not met.
- Reproductive toxicity
  Based on available data, the classification criteria are not met.
- STOT-single exposure
  Based on available data, the classification criteria are not met.
- STOT-repeated exposure
  Based on available data, the classification criteria are not met.
- Aspiration hazard
  Based on available data, the classification criteria are not met.

12 Ecological information

Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.

Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.

Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

<table>
<thead>
<tr>
<th>European waste catalogue</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 3 Flammable</td>
</tr>
<tr>
<td>HP 4 Irritant - skin irritation and eye damage</td>
</tr>
<tr>
<td>HP 6 Acute Toxicity</td>
</tr>
</tbody>
</table>

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **ADR, IMDG, IATA**
  UN1307

- **UN proper shipping name**
- **ADR**
  1307 XYLENES
- **IMDG, IATA**
  XYLENES

- **Transport hazard class(es)**
- **ADR, IMDG, IATA**

  - Class: 3 Flammable liquids.
  - Label: 3

- **Packing group**
- **ADR, IMDG, IATA**
  III

- **Environmental hazards:**
  Not applicable.

- **Special precautions for user**
  Warning: Flammable liquids.

- **Danger code (Kemler):**
  30

- **EMS Number:**
  F-E,S-E

- **Stowage Category:**
  A

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  Not applicable.

- **Transport/Additional information:**
- **ADR**
- **Limited quantities (LQ)**
  5L
Trade name: 2-Naphthol Standard (1 x 2 mL)

| · Excepted quantities (EQ) | Code: E1 |
| · Transport category | Maximum net quantity per inner packaging: 30 ml |
| · Tunnel restriction code | Maximum net quantity per outer packaging: 1000 ml |
| · IMDG | 3 |
| · Limited quantities (LQ) | D/E |
| · Excepted quantities (EQ) | 5L |
| · UN "Model Regulation": | Code: E1 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H315 Causes skin irritation.
  - H332 Harmful if inhaled.

- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2