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

- 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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - Further information obtainable from:
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - Muta. 2 H341 Suspected of causing genetic defects.
  - Acute Tox. 4 H312 Harmful in contact with skin.
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2A H319 Causes serious eye irritation.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS07
    - GHS08

- Signal word Warning
- Hazard-determining components of labelling:
  - p-xylene
  - phenol
· **Hazard statements**
  Flammable liquid and vapour.
  Harmful in contact with skin.
  Causes skin irritation.
  Causes serious eye irritation.
  Suspected of causing genetic defects.

· **Precautionary statements**
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
  Read label before use.
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Wash thoroughly after handling.
  Wear protective gloves/protective clothing/eye protection/face protection.
  Use personal protective equipment as required.
  IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  IF exposed or concerned: Get medical advice/attention.
  Call a POISON CENTER/doctor if you feel unwell.
  Specific measures (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Take off contaminated clothing and wash before reuse.
  Wash contaminated clothing before reuse.
  In case of fire: Use for extinction: CO2, powder or water spray.
  Store in a well-ventilated place. Keep cool.
  Store locked up.
  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 and Information on Ingredients

· **Chemical characterisation**: Mixtures

· **Description**: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>p-xylene 106-42-3</td>
<td>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
<td>97.677%</td>
</tr>
<tr>
<td>phenol 108-95-2</td>
<td>Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; STOT RE 2, H373; Skin Corr. 1, H314</td>
<td>2.323%</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 Fire Fighting 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.
8 Exposure controls and 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>Description</th>
<th>NES Short-term</th>
<th>NES Long-term</th>
<th>WES Short-term</th>
<th>WES Long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</td>
<td>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</td>
</tr>
<tr>
<td>108-95-2</td>
<td>phenol</td>
<td>4 mg/m³, 1 ppm</td>
<td>Sk</td>
<td>4 mg/m³, 1 ppm</td>
<td>Sk</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 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.

(Contd. on page 5)
Trade name: Phenol Standard (1X2 mL)

- 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

<table>
<thead>
<tr>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information on basic physical and chemical properties</strong></td>
</tr>
<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>
<tr>
<td><strong>pH-value:</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
</tr>
<tr>
<td>Melting point/freezing point: 13.3 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range: 138 °C</td>
</tr>
<tr>
<td><strong>Flash point:</strong> 25 °C</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong> Not applicable.</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong> 525 °C</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature:</strong> Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Explosion properties:</strong> Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
</tr>
<tr>
<td>Lower: 1.7 Vol %</td>
</tr>
<tr>
<td>Upper: 7.6 Vol %</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C:</strong> 9 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong> 0.86588 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Vapour density</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water at 20 °C:</strong> 0.2 g/l</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water:</strong> Not determined.</td>
</tr>
</tbody>
</table>
Trade name: Phenol Standard (1X2 mL)

- 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

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimates)</td>
</tr>
<tr>
<td>Oral LD50 3,601 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50 1,083 mg/kg</td>
</tr>
<tr>
<td>Inhalative LC50/4 h 126 mg/L</td>
</tr>
</tbody>
</table>

  | 106-42-3 p-xylene                         |
  | Oral LD50 5,000 mg/kg (rat)               |
  | Inhalative LC50/4 h 4,550 mg/L (rat)      |

  | 108-95-2 phenol                           |
  | Oral LD50 282 mg/kg (rat)                 |
  | Dermal LD50 660 mg/kg (rat)               |
  |                                           |

- Primary irritant effect:
- Skin corrosion/irritation: Irritant to skin and mucous membranes.
- Serious eye damage/irritation: Irritating effect.
- Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant
Trade name: Phenol Standard (1X2 mL)

- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
  Muta. 2

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

14 Transport information

- UN-Number
  - ADG, IMDG, IATA UN1307
- UN proper shipping name
  - ADG 1307 XYLENES
  - IMDG, IATA XYLENES
- Transport hazard class(es)
  - ADG, IMDG, IATA
    - Class 3 Flammable liquids.
    - Label 3

(Contd. of page 6)
### Trade name: Phenol Standard (1X2 mL)

| · Packing group | · ADG, 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: | | |
| · ADG | 5L |
| · Limited quantities (LQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| · Excepted quantities (EQ) | |
| · Transport category | 3 |
| · Tunnel restriction code | D/E |
| · IMDG | 5L |
| · Limited quantities (LQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| · Excepted quantities (EQ) | |
| · UN "Model Regulation": | UN 1307 XYLENES, 3, III |

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    - All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    - 108-95-2 phenol S2, S4, S5, S6
  - 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
  - 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.
Trade name: Phenol Standard (1X2 mL)

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
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. 1: Skin corrosion/irritation – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Muta. 2: Germ cell mutagenicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
1 Identification

- Product identifier
- Trade name: o-Cresol Standard (1 x 2 mL)
- Part number: WRK-170B
- 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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Flam. Liq. 3  H226  Flammable liquid and vapour.
  - Acute Tox. 4  H312  Harmful in contact with skin.
  - Skin Irrit. 2  H315  Causes skin irritation.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).

- Hazard pictograms
  - GHS02
  - GHS07

- Signal word Warning

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

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

- Precautionary statements
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.

(Contd. on page 2)
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
In case of fire: Use for extinction: CO2, powder or water spray.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition and Information on Ingredients

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

- Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>100%</td>
</tr>
</tbody>
</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.
  Indication of any immediate medical attention and special treatment needed: No further relevant information available.
5 Fire Fighting 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 storeroms 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 and 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
    | NES | Short-term value: 655 mg/m³, 150 ppm |
    |     | Long-term value: 350 mg/m³, 80 ppm  |
48.1.26

WES Short-term value: 655 mg/m³, 150 ppm
Long-term value: 350 mg/m³, 80 ppm

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>0.861 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>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 at 20 °C</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATE (Acute Toxicity Estimates)</strong></td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>1,100 mg/kg</td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

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

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant

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.
### 14 Transport information

| · UN-Number | UN1307 |
| · ADG, IMDG, IATA | UN1307 |
| · UN proper shipping name | 1307 XYLENES |
| · ADG | XYLENES |
| · IMDG, IATA | XYLENES |

| · Transport hazard class(es) |
| · ADG, IMDG, IATA |

| · Class | 3 Flammable liquids. |
| · Label | 3 |

| · Packing group |
| · ADG, IMDG, IATA | III |

| · Environmental hazards: |
| · ADG, IMDG, IATA | Not applicable. |

| · Special precautions for user |
| · ADG, IMDG, IATA | Warning: Flammable liquids. |

| · Danger code (Kemler): |
| · ADG, IMDG, IATA | 30 |

| · EMS Number: |
| · ADG, IMDG, IATA | F-E,S-E |

| · Stowage Category |
| · ADG, IMDG, IATA | A |

| · Transport in bulk according to Annex II of Marpol and the IBC Code |
| · ADG, IMDG, IATA | Not applicable. |

| · Transport/Additional information: |
| · ADG |
| · Limited quantities (LQ): |
| · Excepted quantities (EQ): |
| · Code: E1 |
| Maximum net quantity per inner packaging: 30 ml |
| Maximum net quantity per outer packaging: 1000 ml |

| · Transport category |
| · ADG, IMDG, IATA | 3 |

| · Tunnel restriction code |
| · ADG, IMDG, IATA | D/E |

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

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

(Contd. on page 8)
Trade name: o-Cresol Standard (1 x 2 mL)

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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

- Product identifier
  - Trade name: m-Cresol Standard (1 x 2 mL)
  - Part number: WRK-170C
  - 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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - Further information obtainable from:
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Flame
    Flam. Liq. 3 H226 Flammable liquid and vapour.
  - Acute Tox. 4 H312 Harmful in contact with skin.
  - Skin Irrit. 2 H315 Causes skin irritation.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms
    GHS02 GHS07

- Signal word Warning

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

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

- Precautionary statements
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.

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

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Composition and Information on Ingredients

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

  - Dangerous components:
    
    | 106-42-3 p-xylene | 100% |
    |-------------------|------|
    | ☐ 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.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.
5 Fire Fighting 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 and 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
      - NES Short-term value: 655 mg/m³, 150 ppm
      - Long-term value: 350 mg/m³, 80 ppm
48.1.26

WES Short-term value: 655 mg/m³, 150 ppm
Long-term value: 350 mg/m³, 80 ppm

· 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
### 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

- LD/LC50 values relevant for classification:

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

106-42-3 p-xylene

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

- Primary irritant effect:
- Skin corrosion/irritation Irritant to skin and mucous membranes.
- Serious eye damage/irritation No irritating effect.
- Respiratory or skin sensitisation No sensitising effects known.

- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant

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.
### 14 Transport information

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>UN1307</td>
</tr>
<tr>
<td>ADG, IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>1307 XYLENES</td>
</tr>
<tr>
<td>ADG</td>
<td>XYLENES</td>
</tr>
<tr>
<td>IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>ADG, IMDG, IATA</td>
</tr>
<tr>
<td>Class</td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>ADG, IMDG, IATA</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<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</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of Marpol</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>and the IBC Code</td>
<td></td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td></td>
</tr>
<tr>
<td>ADG</td>
<td>5L</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 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>5L</td>
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<tr>
<td>Limited quantities (LQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>UN 1307 XYLENES, 3, III</td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to WHS Regulations

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

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Australian Inventory of Chemical Substances
  - All ingredients are listed.
- Standard for the Uniform Scheduling of Medicines and Poisons
  - None of the ingredients is listed.
- 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
  - 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
  - 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

- 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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  Flam. Liq. 3  H226  Flammable liquid and vapour.
  Acute Tox. 4  H312  Harmful in contact with skin.
  Skin Irrit. 2  H315  Causes skin irritation.

- Label elements
  GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  Hazard pictograms
  GHS02  GHS07

- Signal word Warning
- Hazard-determining components of labelling:
  p-xylene
- Hazard statements
  Flammable liquid and vapour.
  Harmful in contact with skin.
  Causes skin irritation.
- Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
**3 Composition and Information on Ingredients**

- **Chemical characterisation:** Mixtures
  - **Description:** Mixture of substances listed below with nonhazardous additions.
  - **Dangerous components:**
    - **106-42-3 p-xylene**
      - Flamm. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315 100%
  - **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.
    - **Indication of any immediate medical attention and special treatment needed**: No further relevant information available.
5 Fire Fighting 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 and 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
  | NES | Short-term value: 655 mg/m³, 150 ppm |
  | Long-term value: 350 mg/m³, 80 ppm |
48.1.26 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
### 48.1.26 

- **Flash point:** 25 °C  
- **Flammability (solid, gas):** Not applicable.  
- **Ignition temperature:** 525 °C  
- **Decomposition temperature:** Not determined.  
- **Auto-ignition temperature:** Product is not self-igniting.  
- **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 dangerous reactions known.  
  - **Incompatible materials:** No further relevant information available.  
  - **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological Information

· Information on toxicological effects
  · Acute toxicity
    · LD/LC50 values relevant for classification:
      ATE (Acute Toxicity Estimates)
      | Type      | Value          |
      |-----------|----------------|
      | Oral LD50 | 5,000 mg/kg (rat) |
      | Dermal LD50 | 1,100 mg/kg     |
      | Inhalative LC50/4 h | 4,550 mg/L (rat) |

  · Primary irritant effect:
    · Skin corrosion/irritation: Irritant to skin and mucous membranes.
    · Serious eye damage/irritation: No irritating effect.
    · Respiratory or skin sensitisation: No sensitising effects known.

  · Additional toxicological information:
    The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    Harmful
    Irritant

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.
### 14 Transport information

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

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

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

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

- **Packing group**
  - ADG, 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:**

  - **ADG**
    - **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

(Contd. on page 8)
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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

· 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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
· Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
· Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· Classification of the substance or mixture

  ! WARNING
  Flammable liquid and vapour.
  Harmful in contact with skin.

  ! CAUTION
  Causes skin irritation.

· Label elements
  GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  Hazard pictograms

  GHS02
  GHS07

· Signal word Warning

· Hazard-determining components of labelling:
  p-xylene

· Hazard statements
  Flammable liquid and vapour.
  Harmful in contact with skin.
  Causes skin irritation.

· Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
Trade name: 2,3-Xylenol Standard (1 x 2 mL)

(Contd. of page 1)

- Read label before use.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wash thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Call a POISON CENTER/doctor if you feel unwell.
- Specific measures (see on this label).
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash before reuse.
- Wash contaminated clothing before reuse.
- In case of fire: Use for extinction: CO2, powder or water spray.
- Store in a well-ventilated place. Keep cool.
- 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 and Information on Ingredients

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

· Dangerous components:

  | 106-42-3 p-xylene | 100% |
  | 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.
  · Indication of any immediate medical attention and special treatment needed
    No further relevant information available.

(Contd. on page 3)
5 Fire Fighting 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 and 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
    | NES          | Short-term value: 655 mg/m³, 150 ppm |
    |             | Long-term value: 350 mg/m³, 80 ppm |
Trade name: 2,3-Xylenol Standard (1 x 2 mL)

- **WES**: Short-term value: 655 mg/m³, 150 ppm
  Long-term value: 350 mg/m³, 80 ppm

- **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**: 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
Safety Data Sheet
according to WHS Regulations

Trade name: 2,3-Xylenol Standard (1 x 2 mL)

- **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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>0.861 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>· 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 at 20 °C:</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>· VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>· Solids content:</td>
<td>0.0 %</td>
</tr>
<tr>
<td>· Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

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

· LD/LC50 values relevant for classification:

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

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: Irritant to skin and mucous membranes.
· Serious eye damage/irritation: No irritating effect.
· Respiratory or skin sensitisation: No sensitising effects known.
· Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

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.
### 14 Transport information

<table>
<thead>
<tr>
<th>· UN-Number</th>
<th>UN1307</th>
</tr>
</thead>
<tbody>
<tr>
<td>· ADG, IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>· UN proper shipping name</td>
<td>1307 XYLENES</td>
</tr>
<tr>
<td>· ADG</td>
<td></td>
</tr>
<tr>
<td>· IMDG, IATA</td>
<td>XYLENES</td>
</tr>
<tr>
<td>· Transport hazard class(es)</td>
<td>ADG, IMDG, IATA</td>
</tr>
<tr>
<td>· Class</td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>· Label</td>
<td>3</td>
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<tr>
<td>· Packing group</td>
<td>ADG, IMDG, IATA</td>
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<tr>
<td>· Class</td>
<td>III</td>
</tr>
<tr>
<td>· Environmental hazards:</td>
<td>Not applicable.</td>
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<tr>
<td>· Special precautions for user</td>
<td>Warning: Flammable liquids.</td>
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<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>· ADG</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></td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 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>
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</tr>
<tr>
<td>· UN &quot;Model Regulation&quot;:</td>
<td>UN 1307 XYLENES, 3, III</td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to WHS Regulations

Trade name: 2,3-Xylenol Standard (1 x 2 mL)

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Australian Inventory of Chemical Substances
    All ingredients are listed.
  · Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  · 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
    · 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
  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

· 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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia

· Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msd_author@agilent.com
  · Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· Classification of the substance or mixture

  ◆ flam

  Flam. Liq. 3  H226  Flammable liquid and vapour.

  ◆ !

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

· Label elements

  ◆ GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  ◆ Hazard pictograms

  GHS02  GHS07

· Signal word Warning

· Hazard-determining components of labelling:
  p-xylene

· Hazard statements
  Flammable liquid and vapour.
  Harmful in contact with skin.
  Causes skin irritation.

· Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.

(Contd. on page 2)
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

<table>
<thead>
<tr>
<th>106-42-3</th>
<th>p-xylene</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<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>

- **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.
- **Indication of any immediate medical attention and special treatment needed**
  - No further relevant information available.
5 Fire Fighting 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 and 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
    | NES       | Short-term value: 655 mg/m³, 150 ppm |
    |           | Long-term value: 350 mg/m³, 80 ppm   |
48.1.26 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
Trade name: 2,4-Xylenol Standard (1 x 2 mL)

- **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

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimates)</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>1,100 mg/kg</td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritiation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

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.
14 Transport information

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

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

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

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

- **Packing group**
  - ADG, 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**:

  - **ADG**
    - **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
  
  - **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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
    - 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
  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

- 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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture

  ![Flame](https://via.placeholder.com/150)
  Flam. Liq. 3  H226  Flammable liquid and vapour.

  ![Exclamation Mark](https://via.placeholder.com/150)
  Acute Tox. 4  H312  Harmful in contact with skin.
  Skin Irrit. 2  H315  Causes skin irritation.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms

  ![Flame](https://via.placeholder.com/150)  ![Exclamation Mark](https://via.placeholder.com/150)
  GHS02  GHS07

- Signal word Warning

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

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

- Precautionary statements
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.

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

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

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

100%

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

(Contd. on page 3)
5 Fire Fighting 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 and 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
      - NES Short-term value: 655 mg/m³, 150 ppm
      - Long-term value: 350 mg/m³, 80 ppm
Trade name: 2,5-Xylenol Standard (1 x 2 mL)

WES  Short-term value: 655 mg/m³, 150 ppm  
Long-term value: 350 mg/m³, 80 ppm

**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
### 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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>0.861 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>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 at 20 °C</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>
11 Toxicological Information

- Information on toxicological effects
- Acute toxicity

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

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

106-42-3 p-xylene

| Oral LD50 | 5,000 mg/kg (rat) |
| Inhale LC50/4 h | 4,550 mg/L (rat) |

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

**Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

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

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

### 14 Transport information

<table>
<thead>
<tr>
<th>· UN-Number</th>
<th>UN1307</th>
</tr>
</thead>
<tbody>
<tr>
<td>· UN proper shipping name</td>
<td>1307 XYLENES</td>
</tr>
<tr>
<td>· ADG</td>
<td>XYLENES</td>
</tr>
<tr>
<td>· ADG, IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>· IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>· Class</td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>· Label</td>
<td>3</td>
</tr>
<tr>
<td>· Packing group</td>
<td></td>
</tr>
<tr>
<td>· ADG, IMDG, IATA</td>
<td>III</td>
</tr>
<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>· ADG</td>
<td></td>
</tr>
<tr>
<td>· Limited quantities (LQ)</td>
<td>5L</td>
</tr>
<tr>
<td>· Exected quantities (EQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 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>· Exected quantities (EQ)</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
</tr>
<tr>
<td>· UN &quot;Model Regulation&quot;:</td>
<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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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

- **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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - **Further information obtainable from:**
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  - **flame**
    - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - **Acute Tox. 4 H312 Harmful in contact with skin.
    - Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  - p-xylene
- **Hazard statements**
  - Flammable liquid and vapour.
  - Harmful in contact with skin.
  - Causes skin irritation.
- **Precautionary statements**
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.
Trade name: 2,6-Xylenol Standard (1 x 2 mL)

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

- Dangerous components:
  
  106-42-3 p-xylene
  
  ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315

  100%

- 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.
  - Indication of any immediate medical attention and special treatment needed
    No further relevant information available.
5 Fire Fighting 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 and 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
  | NES   | Short-term value: 655 mg/m³, 150 ppm |
  |       | Long-term value: 350 mg/m³, 80 ppm  |
Trade name: 2,6-Xylenol Standard (1 x 2 mL)

- 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 11-13 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 12-15 mil 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
# Safety Data Sheet

According to WHS Regulations

Printing date 01.04.2019  Revision: 31.03.2019  Version number 1

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>0.861 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>· 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 at 20 °C</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>· Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>· Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

## 10 Stability and Reactivity

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>No further relevant information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided</td>
<td>No decomposition if used according to specifications.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No dangerous reactions known.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No dangerous decomposition products known.</td>
</tr>
</tbody>
</table>

(Contd. on page 6)
11 Toxicological Information

- Information on toxicological effects
  - Acute toxicity

  - LD/LC50 values relevant for classification:
    ATE (Acute Toxicity Estimates)
    | Type     | LD50       | LC50/4 h  |
    |-----------|------------|-----------|
    | Oral      | 5,000 mg/kg (rat) |          |
    | Dermal    | 1,100 mg/kg   |          |
    | Inhalative| 4,550 mg/L (rat) |          |

  - Primary irritant effect:
    - Skin corrosion/irritation: Irritant to skin and mucous membranes.
    - Serious eye damage/irritation: No irritating effect.
    - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

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.
# 14 Transport information

| · UN-Number | UN1307 |
| · ADG, IMDG, IATA | |
| · UN proper shipping name | 1307 XYLENES |
| · ADG | XYLENES |
| · IMDG, IATA | |

- **Transport hazard class(es)**
  - ADG, 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**:  
  - **ADG**
    - 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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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

- **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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - **Further information obtainable from:**
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  - Flame
    - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - Exclamation mark
    - Acute Tox. 4 H312 Harmful in contact with skin.
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
  - **Hazard pictograms**
    - Flammable GHS02
    - Corrosive GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  - p-xylene
  - 3,4-xylenol
- **Hazard statements**
  - Flammable liquid and vapour.
  - Harmful in contact with skin.
  - Causes skin irritation.
  - Causes serious eye irritation.
48.1.26

· Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
  Read label before use.
  Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Wash thoroughly after handling.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Call a POISON CENTER/doctor if you feel unwell.
  Specific measures (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Take off contaminated clothing and wash before reuse.
  Wash contaminated clothing before reuse.
  In case of fire: Use for extinction: CO₂, powder or water spray.
  Store in a well-ventilated place. Keep cool.
  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 and Information on Ingredients

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

· Dangerous components:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>97.677%</td>
</tr>
<tr>
<td>95-65-8 3,4-xyleneol</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.
48.1.26

· 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 Fire Fighting 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.

(Contd. of page 2)
(Contd. on page 4)
8 Exposure controls and 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** |
| **NES** Short-term value: 655 mg/m³, 150 ppm |
| Long-term value: 350 mg/m³, 80 ppm |
| **WES** Short-term value: 655 mg/m³, 150 ppm |
| Long-term value: 350 mg/m³, 80 ppm |

- 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 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
**Trade name: 3,4-Xylenol Standard (1X2 mL)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>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>Vapour pressure at 20 °C</td>
<td>9 hPa</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>0.86599 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>Not determined.</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>
<tr>
<td>VOC (EC)</td>
<td>97.68 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

**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.
11 Toxicological Information

· Information on toxicological effects
  · Acute toxicity
    · LD/LC50 values relevant for classification:
      ATE (Acute Toxicity Estimates)
      | Route of Exposure | LD50/LC50 | Value |
      |-------------------|-----------|-------|
      | Oral              | LD50      | 4,399 mg/kg (rat) |
      | Dermal            | LD50      | 1,036 mg/kg |
      | Inhalative        | LC50/4 h  | 4,658 mg/L (rat) |
      106-42-3 p-xylene
      | Oral              | LD50      | 5,000 mg/kg (rat) |
      | Inhalative        | LC50/4 h  | 4,550 mg/L (rat) |
      95-65-8 3,4-xylenol
      | Oral              | LD50      | 727 mg/kg (rat) |

· Primary irritant effect:
  · Skin corrosion/irritation Irritant to skin and mucous membranes.
  · Serious eye damage/irritation Irritating effect.
  · Respiratory or skin sensitisation No sensitising effects known.
  · Additional toxicological information:
    The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    Harmful
    Irritant

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.

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

### 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>UN1307</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>1307 XYLENES</td>
</tr>
<tr>
<td><strong>ADG, IMDG, IATA</strong></td>
<td>XYLENES</td>
</tr>
</tbody>
</table>

- **Transport hazard class(es)**
  - **ADG, IMDG, IATA**
  - **Class:** 3 Flammable liquids.
  - **Label:** 3

- **Packing group**
  - **ADG, IMDG, IATA**
  - **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:**
  - **ADG**
    - **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
  
  - **IMDG**
    - **Limited quantities (LQ):** 5L
Trade name: 3,4-Xylenol Standard (1X2 mL)

- 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
  - Australian Inventory of Chemical Substances
    - All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    - None of the ingredients is listed.
  - 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
  - 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.

- 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
  - 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
  - Flamm. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 3: Acute toxicity – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Corr. 1: Skin corrosion/irritation – Category 1
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
1 Identification

- **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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- **Further information obtainable from**:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number**: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**

  ![Flame](flame.png)

  Flam. Liq. 3  H226  Flammable liquid and vapour.

  ![Exclamation Mark](exclamation.png)

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

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**

  ![Flame](flame.png) ![Exclamation Mark](exclamation.png)

  GHS02  GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling**:
  p-xylene
  3,5-xylene
- **Hazard statements**
  Flammable liquid and vapour.
  Harmful in contact with skin.
  Causes skin irritation.
  Causes serious eye irritation.

(Contd. on page 2)
Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.

Specific measures (see on this label).

3 Composition and Information on Ingredients

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

Dangerous components:

<table>
<thead>
<tr>
<th>Substance</th>
<th>PBT</th>
<th>vPvB</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flam. Liq. 3, H226;</td>
<td>Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>108-68-9 3,5-xylenol</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 3, H301; Acute Tox. 3, H311;</td>
<td>Skin Corr. 1, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>97.677%</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.
48.1.26

· 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 Fire Fighting 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 and 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>NES Short-term value</th>
<th>NES Long-term value</th>
<th>WES Short-term value</th>
<th>WES Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</td>
<td>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</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 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
Trade name: 3,5-Xylenol Standard (1x2 mL)

**48.1.26 Colour:**
According to product specification

**Odour:**
Characteristic

**Odour threshold:**
Not determined.

**pH-value:**
Not determined.

**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.

**Explosion 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:**
0.86507 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 %
- 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.
Trade name: 3,5-Xylenol Standard (1X2 mL)

- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATE (Acute Toxicity Estimates)</strong></td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

- **106-42-3 p-xylene**
  - Oral | LD50 | 5,000 mg/kg (rat) |
  - Inhalative | LC50/4 h | 4,550 mg/L (rat) |

- **108-68-9 3,5-xylenol**
  - Oral | LD50 | 608 mg/kg (rat) |

- **Primary irritant effect:**
  - **Skin corrosion/irritation** Irritant to skin and mucous membranes.
  - **Serious eye damage/irritation** Irritating effect.
  - **Respiratory or skin sensitisation** No sensitising effects known.

- **Additional toxicological information:**
  - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    - Harmful
    - Irritant

### 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.

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

### 14 Transport information

- **UN-Number**
  - ADG, IMDG, IATA: UN1307
- **UN proper shipping name**
  - ADG: 1307 XYLENES
  - IMDG, IATA: XYLENES
- **Transport hazard class(es)**
  - ADG, 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:**
  - ADG
    - Limited quantities (LQ): 5L
    - Excepted quantities (EQ): Code: E1
    - Transport category: 3
    - Tunnel restriction code: D/E
  - IMDG
    - Limited quantities (LQ): 5L
Trade name: 3,5-Xylenol Standard (1X2 mL)

- 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
  - Australian Inventory of Chemical Substances
    - All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    - None of the ingredients is listed.
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I
    - 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
    - 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.
- 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
  - 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. 1: Skin corrosion/irritation – Category 1
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
1 Identification

- **Product identifier**
- **Trade name:** o-Ethylphenol Standard (1 x 2 mL)
- **Part number:** WRK-170K
- **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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- **Further information obtainable from:**
  - Telephone: 1800 802 402
  - e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  - Flammable liquid and vapour.
  - Harmful in contact with skin.
  - Causes skin irritation.
- **GHS label elements**
  - The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**
  - GHS02
  - GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
  - p-xylene
- **Hazard statements**
  - Flammable liquid and vapour.
  - Harmful in contact with skin.
  - Causes skin irritation.
- **Precautionary statements**
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.

(Contd. on page 2)
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Take off contaminated clothing and wash before reuse.
In case of fire: Use for extinguition: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

#### Dangerous components:

<table>
<thead>
<tr>
<th>Purity</th>
<th>106-42-3</th>
<th>p-xylene</th>
<th>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100%</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.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

(Contd. on page 3)
5 Fire Fighting 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 and 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 |
    |-------------------|
    | NES               |
    | Short-term value: 655 mg/m³, 150 ppm |
    | Long-term value: 350 mg/m³, 80 ppm  |
Trade name: o-Ethylphenol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>WES</th>
<th>Short-term value: 655 mg/m³, 150 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 350 mg/m³, 80 ppm</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
### 48.1.26

- **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

- LD/LC50 values relevant for classification:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LD50</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>1,100 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

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

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

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.
### 14 Transport information

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

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

- **Transport hazard class(es)**
  - ADG, IMDG, IATA: Flammable liquids.

  - **Class**: 3
  - **Label**: 3
  - **Packing group**: ADG, 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:**
  - **ADG**
    - **Limited quantities (LQ)**: 5L
    - **Excepted quantities (EQ)**: Code: E1

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

  - **IMDG**
    - **Limited quantities (LQ)**: 5L
    - **Excepted quantities (EQ)**: Code: E1

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

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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

· 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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia

· Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com

· Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· Classification of the substance or mixture
  ![flame]
  Flam. Liq. 3  H226  Flammable liquid and vapour.

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

· Label elements
  · GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  · Hazard pictograms
    ![flame]  GHS02
    ![exclamation]  GHS07

· Signal word Warning

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

· Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.

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

- Read label before use.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wash thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Call a POISON CENTER/doctor if you feel unwell.
- Specific measures (see on this label).
- In case of fire: Use for extinction: CO2, powder or water spray.
- Store in a well-ventilated place. Keep cool.
- 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 and Information on Ingredients

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

3.1 Dangerous components:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Material</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td>100%</td>
</tr>
</tbody>
</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.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.
5 Fire Fighting 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 storeroms 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 and 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>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</td>
</tr>
</tbody>
</table>
48.1.26

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
### Safety Data Sheet

according to WHS Regulations

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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.</td>
</tr>
<tr>
<td>Flash point</td>
<td>25 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
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<td>Ignition temperature</td>
<td>525 °C</td>
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<td>Decomposition temperature</td>
<td>Not determined.</td>
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<tr>
<td>Auto-ignition temperature</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product is not explosive.</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>0.861 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>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 at 20 °C</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

#### 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**

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

**ATE (Acute Toxicity Estimates)**

<table>
<thead>
<tr>
<th>Type</th>
<th>LD50</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg</td>
<td>4,550 mg/L (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>1,100 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,550 mg/L (rat)</td>
<td></td>
</tr>
</tbody>
</table>

**106-42-3 p-xylene**

<table>
<thead>
<tr>
<th>Type</th>
<th>LD50</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg</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** Irritant to skin and mucous membranes.
  - **Serious eye damage/irritation** No irritating effect.
  - **Respiratory or skin sensitisation** No sensitising effects known.

- **Additional toxicological information:**
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant

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.
48.1.26

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

14 Transport information

· UN-Number
  · ADG, IMDG, IATA
  · UN1307

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

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

  · Class
    3 Flammable liquids.

  · Label
    3

· Packing group
  · ADG, 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:

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

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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

- **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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- **Further information obtainable from:**
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number**: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  - **flame**
  - Flam. Liq. 3  H226  Flammable liquid and vapour.
  - **Acute Tox. 4  H312**  Harmful in contact with skin.
  - **Skin Irrit. 2  H315**  Causes skin irritation.
- **Label elements**
  - **GHS label elements**
    The product is classified and labelled according to the Globally Harmonised System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07
  - **Signal word**
    Warning
  - **Hazard-determining components of labelling:**
    - p-xylene
  - **Hazard statements**
    - Flammable liquid and vapour.
    - Harmful in contact with skin.
    - Causes skin irritation.
  - **Precautionary statements**
    - If medical advice is needed, have product container or label at hand.
    - Keep out of reach of children.

(Contd. on page 2)
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
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 and Information on Ingredients

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

#### Dangerous components:

<table>
<thead>
<tr>
<th>106-42-3</th>
<th>p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flamm. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
<td>100%</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.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.
5 Fire Fighting 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 and 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 |
| NES | Short-term value: 655 mg/m³, 150 ppm |
|     | Long-term value: 350 mg/m³, 80 ppm     |
Safety Data Sheet
according to WHS Regulations

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

WES Short-term value: 655 mg/m³, 150 ppm
Long-term value: 350 mg/m³, 80 ppm

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

- **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

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimates)</td>
</tr>
<tr>
<td>Oral LD50</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
</tr>
<tr>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>1,100 mg/kg</td>
</tr>
<tr>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

| Oral LD50 | 5,000 mg/kg (rat) |
| Dermal LD50 | 1,100 mg/kg |
| Inhalative LC50/4 h | 4,550 mg/L (rat) |

Primary irritant effect:
- Skin corrosion/irritation: Irritant to skin and mucous membranes.
- Serious eye damage/irritation: No irritating effect.
- Respiratory or skin sensitisation: No sensitising effects known.

Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
- Harmful
- Irritant

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.
## 14 Transport information

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

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

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

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
<th>Packing group</th>
<th>Environmental hazards:</th>
<th>Special precautions for user</th>
<th>Danger code (Kemler):</th>
<th>EMS Number:</th>
<th>Stowage Category</th>
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<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>III</td>
<td>Not applicable.</td>
<td>Warning: Flammable liquids.</td>
<td>30</td>
<td>F-E,S-E</td>
<td>A</td>
</tr>
</tbody>
</table>

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

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

- **Transport/Additional information:**

<table>
<thead>
<tr>
<th>ADG</th>
<th>IMDG</th>
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</thead>
<tbody>
<tr>
<td><strong>Limited quantities (LQ)</strong></td>
<td>5L</td>
</tr>
<tr>
<td>Code: E1</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>

<table>
<thead>
<tr>
<th>Transport category</th>
<th>Tunnel restriction code</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>D/E</td>
</tr>
</tbody>
</table>

| **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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
- 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
- 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
  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

- **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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- **Further information obtainable from:**
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  - Flammable liquid and vapour.
  - Harmful in contact with skin.
  - Causes skin irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Warning

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

- **Precautionary statements**
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.

(Contd. on page 2)
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

· Dangerous components:

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<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.
  · Indication of any immediate medical attention and special treatment needed
    No further relevant information available.

(Contd. on page 3)
5 Fire Fighting 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 and 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**
      - NES Short-term value: 655 mg/m³, 150 ppm
      - Long-term value: 350 mg/m³, 80 ppm

(Contd. on page 4)
## 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
### 48.1.26

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

### 11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

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

| ATE (Acute Toxicity Estimates) | Oral LD50 | 5,000 mg/kg (rat) |
| Dermal LD50 | 1,100 mg/kg |
| Inhalative LC50/4 h | 4,550 mg/L (rat) |

| 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** Irritant to skin and mucous membranes.
  - **Serious eye damage/irritation** No irritating effect.
  - **Respiratory or skin sensitisation** No sensitising effects known.

- **Additional toxicological information:**
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

### 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.
14 Transport information

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>UN1307</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>ADG 1307 XYLENES</td>
</tr>
<tr>
<td>ADG</td>
<td>IMDG XYLENES</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>ADG IMDG IATA</td>
</tr>
<tr>
<td>Class</td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
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<tr>
<td>Packing group</td>
<td>ADG IMDG IATA</td>
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<tr>
<td>Class</td>
<td>III</td>
</tr>
<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</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>and the IBC Code</td>
<td></td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td></td>
</tr>
<tr>
<td>ADG</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 1307 XYLENES, 3, III</td>
</tr>
</tbody>
</table>
### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Australian Inventory of Chemical Substances
    - All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    - None of the ingredients is listed.
  - 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
  - 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
  - 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

- **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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia

- **Further information obtainable from:**
  - **Telephone:** 1800 802 402
  - **e-mail:** pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  - **flame**
  - Flam. Liq. 3 H226 Flammable liquid and vapour.

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

- **Label elements**
  - **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**
  - p-xylene

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

- **Precautionary statements**
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

**Chemical characterisation:** Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

<table>
<thead>
<tr>
<th>106-42-3: p-xylene</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<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.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. on page 3)
5 Fire Fighting 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 and 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
  | NES  | Short-term value: 655 mg/m³, 150 ppm |
  |      | Long-term value: 350 mg/m³, 80 ppm  |
Trade name: 2-n-Propylphenol Standard (1 x 2 mL)

- 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
Safety Data Sheet  
according to WHS Regulations  

Trade name: 2-n-Propylphenol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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.</td>
</tr>
<tr>
<td>Flame temperature</td>
<td>541 °C</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>0.861 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>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 at 20 °C</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

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 dangerous reactions known.
  - **Incompatible materials**: No further relevant information available.
  - **Hazardous decomposition products**: No dangerous decomposition products known.
11 Toxicological Information

- Information on toxicological effects
- Acute toxicity

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

<table>
<thead>
<tr>
<th>Mode of Exposure</th>
<th>LD/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>1,100 mg/kg</td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,550 mg/L (rat)</td>
</tr>
</tbody>
</table>

106-42-3 p-xylene

<table>
<thead>
<tr>
<th>Mode of Exposure</th>
<th>LD/LC50</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>

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant

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.
### 14 Transport information

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

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

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

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

- **Packing group**
  - ADG, 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:**

  - **ADG**
    - 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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
    - 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
  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

- 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

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - Acute Tox. 4 H312 Harmful in contact with skin.
  - Skin Irrit. 2 H315 Causes skin irritation.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS07

- Signal word Warning

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

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

- Precautionary statements
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.
Trade name: 2,3,5-Trimethylphenol Standard (1 x 2 mL)

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

· Dangerous components:
  106-42-3 p-xylene
  · Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315
  100%

· 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 unconscioness 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.
  · Indication of any immediate medical attention and special treatment needed
  No further relevant information available.
5 Fire Fighting 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 and 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>106-42-3 p-xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>NES Short-term value: 655 mg/m³, 150 ppm</td>
</tr>
<tr>
<td>Long-term value: 350 mg/m³, 80 ppm</td>
</tr>
</tbody>
</table>

(Contd. of page 2)
48.1.26

WES Short-term value: 655 mg/m³, 150 ppm
Long-term value: 350 mg/m³, 80 ppm

- 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
### 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

  - LD/LC50 values relevant for classification:

  | ATE (Acute Toxicity Estimates) | Oral LD50 | 5,000 mg/kg (rat) |
  | Dermal LD50 | 1,100 mg/kg |
  | Inhalative LC50/4 h | 4,550 mg/L (rat) |

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

---

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.
### 14 Transport information

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>UN1307</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>1307 XYLENES mixture</td>
</tr>
<tr>
<td>ADG, IMDG, IATA</td>
<td>XYLENES mixture</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>ADG, IMDG, IATA</td>
</tr>
<tr>
<td>Class</td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>ADG, IMDG, IATA</td>
<td></td>
</tr>
<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-D</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>ADG</td>
<td>5L</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 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></td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>UN 1307 XYLENES MIXTURE, 3, III</td>
</tr>
</tbody>
</table>

(Contd. on page 8)
### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Australian Inventory of Chemical Substances**
    - All ingredients are listed.
  - **Standard for the Uniform Scheduling of Medicines and Poisons**
    - None of the ingredients is listed.
  - **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
  - **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
  - 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

- 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 Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Flame
    Flam. Liq. 3  H226  Flammable liquid and vapour.
  - !
    Acute Tox. 4  H312  Harmful in contact with skin.
    Skin Irrit. 2  H315  Causes skin irritation.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS07

- Signal word Warning
- Hazard-determining components of labelling:
  - p-xylene
- Hazard statements
  - Flammable liquid and vapour.
  - Harmful in contact with skin.
  - Causes skin irritation.
- Precautionary statements
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.

(Contd. on page 2)
Trade name: 2,4,6-Trimethylphenol Standard (1 x 2 mL)

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

- Dangerous components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

(Contd. of page 1)
5 Fire Fighting 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 and 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
    NES Short-term value: 655 mg/m³, 150 ppm
    Long-term value: 350 mg/m³, 80 ppm
Safety Data Sheet
according to WHS Regulations

Trade name: 2,4,6-Trimethylphenol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th></th>
<th>WES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term value:</strong></td>
<td>655 mg/m³, 150 ppm</td>
<td></td>
</tr>
<tr>
<td><strong>Long-term value:</strong></td>
<td>350 mg/m³, 80 ppm</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

(Contd. on page 5)
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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.</td>
</tr>
<tr>
<td></td>
<td>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>0.861 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>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>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Dynamic at 20 °C</td>
<td>0.648 mPas</td>
</tr>
<tr>
<td>Kinematic</td>
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</tr>
<tr>
<td>VOC (EC)</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 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
    - LD/LC50 values relevant for classification:
      - ATE (Acute Toxicity Estimates)
        | Route     | Value   |
        |-----------|---------|
        | Oral LD50 | 5,000 mg/kg (rat) |
        | Dermal LD50 | 1,100 mg/kg |
        | Inhalative LC50/4 h | 4,550 mg/L (rat) |
  - Primary irritant effect:
    - Skin corrosion/irritation: Irritant to skin and mucous membranes.
    - Serious eye damage/irritation: No irritating effect.
    - Respiratory or skin sensitisation: No sensitising effects known.
  - Additional toxicological information:
    - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
      - Harmful
      - Irritant

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.
### 14 Transport information

| · UN-Number  | UN1307 |
| · ADG, IMDG, IATA |
| · UN proper shipping name  | 1307 XYLENES mixture |
| · ADG | XYLENES mixture |
| · IMDG, IATA |
| · Transport hazard class(es) | ADG, IMDG, IATA |
| · Class | 3 Flammable liquids. |
| · Label | 3 |
| · Packing group  | III |
| · ADG, IMDG, IATA |
| · 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: |
| · ADG | 5L |
| · Limited quantities (LQ) | Code: E1 |
| · Excepted quantities (EQ) | Maximum net quantity per inner packaging: 30 ml |
| · Transport category | 3 |
| · Tunnel restriction code | D/E |
| · IMDG | 5L |
| · Limited quantities (LQ) | Code: E1 |
| · Excepted quantities (EQ) | Maximum net quantity per inner packaging: 30 ml |
| · UN "Model Regulation": | UN 1307 XYLENES MIXTURE, 3, III |
Trade name: 2,4,6-Trimethylphenol Standard (1 x 2 mL)

15 Regulatory information

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

- Australian Inventory of Chemical Substances
  All ingredients are listed.

- Standard for the Uniform Scheduling of Medicines and Poisons
  None of the ingredients is listed.

- 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
  - 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
  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

- 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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - Further information obtainable from:
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Flam. Liq. 3  H226  Flammable liquid and vapour.
  - Acute Tox. 4  H312  Harmful in contact with skin.
    Skin Irrit. 2  H315  Causes skin irritation.

- GHS label elements
  The product is classified and labelled according to the Globally Harmonised System (GHS).
- Hazard pictograms
  - GHS02
  - GHS07

- Signal word
  Warning

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

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

- Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.

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

(Contd. of page 1)

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash thoroughly after handling.
In case of fire: Use for extinction: CO2, powder or water spray.
Not applicable.
In case of contact: Use personal Victor protective equipment/Proper PPE for each task.
Information for doctor:
After skin contact:
In case of unconsciousness place patient stably in side position for transportation.

(Contd. on page 3)

3 Composition and Information on Ingredients

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

<table>
<thead>
<tr>
<th>106-42-3</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-xylene</td>
<td>100%</td>
</tr>
</tbody>
</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.
- Indication of any immediate medical attention and special treatment needed
No further relevant information available.

(Contd. on page 3)
5 Fire Fighting 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**
  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 and 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
    NES  Short-term value: 655 mg/m³, 150 ppm
    Long-term value: 350 mg/m³, 80 ppm
Trade name: 4-Tert-Butylphenol Standard (1 x 2 mL)

<table>
<thead>
<tr>
<th>WES</th>
<th>Short-term value: 655 mg/m³, 150 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 350 mg/m³, 80 ppm</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
4.8.1.26
· 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

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

| ATE (Acute Toxicity Estimates) | Oral LD50 | 5,000 mg/kg (rat) |
| Dermal LD50 | 1,100 mg/kg |
| Inhalative LC50/4 h | 4,550 mg/L (rat) |

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

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.
### 14 Transport information

- **UN-Number**
  - ADG, IMDG, IATA: UN1307
- **UN proper shipping name**
  - ADG: 1307 XYLENES
  - IMDG, IATA: XYLENES
- **Transport hazard class(es)**
  - ADG, IMDG, IATA
- **Class**
  - 3 Flammable liquids.
- **Label**
  - 3
- **Packing group**
  - ADG, IMDG, IATA: III
- **Emergency response (Kemler):** Warning: Flammable liquids.
- **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:**
  - **ADG**
    - 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
  - **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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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*

- **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 Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - **Further information obtainable from:**
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

*2 Hazard(s) Identification*

- **Classification of the substance or mixture**
  - Flame
  - Flam. Liq. 3  H226 Flammable liquid and vapour.
  - Acute Tox. 4  H312 Harmful in contact with skin.
  - Skin Irrit. 2  H315 Causes skin irritation.
  - Eye Irrit. 2A  H319 Causes serious eye irritation.
  
- **Label elements**
  - **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Warning
  - **Hazard-determining components of labelling:**
    - p-xylene
    - 1-naphthol
  - **Hazard statements**
    - Flammable liquid and vapour.
    - Harmful in contact with skin.
    - Causes skin irritation.
    - Causes serious eye irritation.

(Contd. on page 2)
Precautionary statements
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients
Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>97.677%</td>
</tr>
<tr>
<td>‣ Flam. Liq. 3, H226; ‣ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
<td></td>
</tr>
<tr>
<td>90-15-3 1-naphthol</td>
<td>2.323%</td>
</tr>
<tr>
<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.

Fire Fighting 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.

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.

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 and 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>Ingredient</th>
<th>NES Short-term value</th>
<th>NES Long-term value</th>
<th>WES Short-term value</th>
<th>WES Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3 p-xylene</td>
<td>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</td>
<td>655 mg/m³, 150 ppm</td>
<td>350 mg/m³, 80 ppm</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

  - 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**<br>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. |
| **Explosion properties:** | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| **Explosion limits:**<br>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:**<br>Dynamic at 20 °C: | 0.648 mPas |
| Kinematic: | Not determined. |
| **Solvent content:**<br>Organic solvents: | 97.7 % |
| 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.
11 Toxicological Information

- Information on toxicological effects
  - Acute toxicity

  **LD/LC50 values relevant for classification:**
  
<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>106-42-3 p-xylene</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>90-15-3 1-naphthol</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation: Irritant to skin and mucous membranes.
  - Serious eye damage/irritation: Irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.

- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant

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.

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

14 Transport information

- **UN-Number**
  - ADG, IMDG, IATA
  - **UN1993**

- **UN proper shipping name**
  - ADG
  - IMDG, IATA
  - **1993 FLAMMABLE LIQUID, N.O.S. (XYLENES)**
  - **Flammable LIQUID, N.O.S. (XYLENES)**

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

  - **Class**
    - 3 Flammable liquids.

  - **Label**
    - 3

- **Packing group**
  - ADG, 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**
    - ADG, IMDG, IATA
    - A

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

- **Transport/Additional information:**

  - **ADG**
    - **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
Trade name: 1-Naphthol Standard (1X2 mL)

- **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 1993 FLAMMABLE LIQUID, N.O.S. (XYLENES), 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Australian Inventory of Chemical Substances**
    - All ingredients are listed.
  - **Standard for the Uniform Scheduling of Medicines and Poisons**
    - 90-15-3 1-naphthol S6
  - **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
  - **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
  - 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
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
<table>
<thead>
<tr>
<th>Trade name: 1-Naphthol Standard (1X2 mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT SE 3: Specific target organ toxicity (single exposure) – Category 3</td>
</tr>
<tr>
<td>* Data compared to the previous version altered.</td>
</tr>
</tbody>
</table>
1 Identification

· 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 Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· Further information obtainable from:
Telephone: 1800 802 402
e-mail: pdl-mds_author@agilent.com
· Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· Classification of the substance or mixture

![flame]

Flam. Liq. 3  H226 Flammable liquid and vapour.

![exclamation]

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

· Label elements

· GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).

· Hazard pictograms

![flame]

GHS02

![exclamation]

GHS07

· Signal word Warning

· Hazard-determining components of labelling:

p-xylene

· Hazard statements
Flammable liquid and vapour.
Harmful in contact with skin.
Causes skin irritation.

· Precautionary statements
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.

(Contd. on page 2)
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER/doctor if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
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 and Information on Ingredients

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

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-42-3</td>
<td>p-xylene</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100%</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.
  · Indication of any immediate medical attention and special treatment needed No further relevant information available.
5 Fire Fighting 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 and 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**
      - NES: Short-term value: 655 mg/m³, 150 ppm
      - Long-term value: 350 mg/m³, 80 ppm
Trade name: 2-Naphthol Standard (1 x 2 mL)

- **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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**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

(Contd. on page 5)
### 48.1.26

- **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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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.</td>
</tr>
<tr>
<td>Lower limit of explosive air/vapour mixtures</td>
<td>1.7 Vol %</td>
</tr>
<tr>
<td>Upper limit of explosive air/vapour mixtures</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>0.861 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>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 at 20 °C</td>
<td>0.648 mPas</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>100.0 %</td>
</tr>
<tr>
<td>VOC (EC):</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Solids content:</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 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

  - LD/LC50 values relevant for classification:

    | ATE (Acute Toxicity Estimates) |
    |-------------------------------|
    | Oral LD50                    | 5,000 mg/kg (rat) |
    | Dermal LD50                  | 1,100 mg/kg       |
    | Inhalative LC50/4 h          | 4,550 mg/L (rat)  |

    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 Irritant to skin and mucous membranes.
    - Serious eye damage/irritation No irritating effect.
    - Respiratory or skin sensitisation No sensitising effects known.

  - Additional toxicological information:
    The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    Harmful
    Irritant

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.
14 Transport information

- **UN-Number**  
  UN1307

- **UN proper shipping name**  
  1307 XYLENES

- **ADG, IMDG, IATA**  
  XYLENES

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

- **Class**  
  3 Flammable liquids.

- **Label**  
  3

- **Packing group**  
  ADG, IMDG, IATA

- **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:**

  - **ADG**  
    - **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

  - **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
  - Australian Inventory of Chemical Substances
    All ingredients are listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons
    None of the ingredients is listed.
  - 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
  - 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
  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