1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
  - **Trade name:** 2,6-Dimethylaniline
  - **Part number:** FRNH-179R
  - **CAS Number:** 87-62-7
  - **EC number:** 201-758-7
  - **Index number:** 612-161-00-X
- **Relevant identified uses of the substance or mixture and uses advised against**
  - Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Agilent Technologies Manufacturing GmbH & Co. KG
    - Hewlett-Packard-Str.8
    - 76337 Waldbronn
    - Germany
  - **Further information obtainable from:**
    - Telephone: 0800 603 1000
    - pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - GHS08 health hazard
    - **Carc. 2** H351 Suspected of causing cancer.
  - GHS09 environment
    - **Aquatic Chronic 2** H411 Toxic to aquatic life with long lasting effects.
  - GHS07
    - **Acute Tox. 4** H302 Harmful if swallowed.
    - **Acute Tox. 4** H312 Harmful in contact with skin.
    - **Acute Tox. 4** H332 Harmful if inhaled.
    - **Skin Irrit. 2** H315 Causes skin irritation.
    - **STOT SE 3** H335 May cause respiratory irritation.

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

(Contd. on page 2)
Trade name: 2,6-Dimethylaniline

· Hazard pictograms

![GHS07](image1)
![GHS08](image2)
![GHS09](image3)

· Signal word Warning

· Hazard-determining components of labelling:
  2,6-xylidine 2,6-dimethylaniline

· Hazard statements

  H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
  H315 Causes skin irritation.
  H351 Suspected of causing cancer.
  H335 May cause respiratory irritation.
  H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P201 Obtain special instructions before use.
  P202 Do not handle until all safety precautions have been read and understood.
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P264 Wash thoroughly after handling.
  P270 Do not eat, drink or smoke when using this product.
  P271 Use only outdoors or in a well-ventilated area.
  P273 Avoid release to the environment.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  P330 Rinse mouth.
  P302+P352 IF ON SKIN: Wash with plenty of water.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P308+P313 IF exposed or concerned: Get medical advice/attention.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P391 Collect spillage.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

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

3 Composition/information on ingredients

· Chemical characterisation: Substances

· CAS No. Description

87-62-7 2,6-xylidine 2,6-dimethylaniline
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:
    Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. 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:
    Call for a doctor immediately.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Firefighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
  - Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions:
  Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.
  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
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
  Prevent formation of aerosols.
· Information about fire - and explosion protection: Keep respiratory protective device available.
· Conditions for safe storage, including any incompatibilities
· Storage:
  · Requirements to be met by storerooms and receptacles: No special requirements.
  · Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Keep container tightly sealed.
· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.
· Control parameters
· Ingredients with limit values that require monitoring at the workplace: Not required.
· 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 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
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and
  varies from manufacturer to manufacturer.
### Physical and chemical properties

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

**General Information**

- **Appearance:**
  - Form: Liquid
  - Colour: Light yellow
  - Odour: Characteristic
  - Odour threshold: Not determined.

- **pH-value:** Not determined.

- **Change in condition**
  - Melting point/freezing point: 11.2 °C
  - Initial boiling point and boiling range: 216 °C

- **Flash point:** 91 °C

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

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Explosive properties:**
  - Product does not present an explosion hazard.

**Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

- **Vapour pressure at 20 °C:** 0.15 hPa

- **Density at 20 °C:** 0.984 g/cm³

- **Relative density**
  - Not determined.

- **Vapour density**
  - Not determined.

- **Evaporation rate**
  - Not determined.

- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

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

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

- **Solvent content:**
  - VOC (EC): 0.00 %
  - Other information: No further relevant information available.
10 Stability and reactivity

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

11 Toxicological information

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

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
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<tbody>
<tr>
<td>Oral LD50</td>
<td>840 mg/kg (rat)</td>
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<tr>
<td>Dermal LD50</td>
<td>1,100 mg/kg</td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
<td>11 mg/L</td>
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</tbody>
</table>

87-62-7 2,6-xylidine 2,6-dimethylaniline

| Oral LD50 | 840 mg/kg (rat) |

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

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Ecotoxicological effects:
- Remark: Toxic for fish
Trade name: 2,6-Dimethylaniline

· Additional ecological information:
   · General notes:
     Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
     Do not allow product to reach ground water, water course or sewage system, even in small quantities.
     Danger to drinking water if even extremely small quantities leak into the ground.
     Also poisonous for fish and plankton in water bodies.
     Toxic for aquatic organisms
   · Results of PBT and vPvB assessment
     · PBT: Not applicable.
     · vPvB: Not applicable.
   · Other adverse effects: No further relevant information available.

13 Disposal considerations

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

· European waste catalogue
  HP 4 Irritant - skin irritation and eye damage
  HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
  HP 6 Acute Toxicity
  HP 7 Carcinogenic
  HP 14 Ecotoxic

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

14 Transport information

· UN-Number
· ADR, IMDG, IATA
  UN1711

· UN proper shipping name
· ADR
  1711 XYLIDINES, LIQUID, ENVIRONMENTALLY HAZARDOUS
· IMDG, IATA
  XYLIDINES, LIQUID

· Transport hazard class(es)
· ADR

· Class
  6.1 Toxic substances.
Trade name: 2,6-Dimethylaniline

- **Label**: 6.1
- **IMDG, IATA**

| Class | Label | Packing group
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<td>6.1</td>
<td>6.1</td>
<td>II</td>
</tr>
</tbody>
</table>

- **Environmental hazards:**
- **Special marking (ADR):** Symbol (fish and tree)

- **Special precautions for user**
- **Danger code (Kemler):** Warning: Toxic substances.
- **EMS Number:** 60
- **Stowage Category** A

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

- **Transport/Additional information:**
- **ADR**
  - Limited quantities (LQ): 100 ml
  - Excepted quantities (EQ) Code: E4
    - Maximum net quantity per inner packaging: 1 ml
    - Maximum net quantity per outer packaging: 500 ml
- **Transport category** 2
- **Tunnel restriction code** D/E

- **IMDG**
  - Limited quantities (LQ): 100 ml
  - Excepted quantities (EQ) Code: E4
    - Maximum net quantity per inner packaging: 1 ml
    - Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":** UN 1711 XYLIDINES, LIQUID, 6.1, II, ENVIRONMENTALLY HAZARDOUS

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category** E2 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
Trade name: 2,6-Dimethylaniline

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

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**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.

· **Abbreviations and acronyms:**
  
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  
  IMDG: International Maritime Code for Dangerous Goods
  
  IATA: International Air Transport Association
  
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  
  EINECS: European Inventory of Existing Commercial Chemical Substances
  
  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
  
  Acute Tox. 4: Acute toxicity – Category 4
  
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  
  Carc. 2: Carcinogenicity – Category 2
  
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
  
  Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2