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

- **Product identifier**
- **Trade name:** 3,4-Dichloroaniline
- **Part number:** FRNH-179E
- **CAS Number:** 95-76-1
- **EC number:** 202-448-4
- **Index number:** 612-202-00-1

2 Hazards identification

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

* GHS06 skull and crossbones
  - Acute Tox. 3 H301 Toxic if swallowed.
  - Acute Tox. 3 H311 Toxic in contact with skin.
  - Acute Tox. 3 H331 Toxic if inhaled.

* GHS05 corrosion
  - Eye Dam. 1 H318 Causes serious eye damage.

* GHS09 environment
  - Aquatic Acute 1 H400 Very toxic to aquatic life.
  - Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

* GHS07
  - Skin Sens. 1 H317 May cause an allergic skin reaction.

(Contd. on page 2)
Trade name: 3,4-Dichloroaniline

· Label elements
· Labelling according to Regulation (EC) No 1272/2008
  The substance is classified and labelled according to the CLP regulation.
· Hazard pictograms
  GHS05  GHS06  GHS09

· Signal word Danger
· Hazard-determining components of labelling:
  3,4-dichloroaniline
· Hazard statements
  H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
  H318  Causes serious eye damage.
  H317  May cause an allergic skin reaction.
  H410  Very 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.
  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.
  P272  Contaminated work clothing should not be allowed out of the workplace.
  P273  Avoid release to the environment.
  P280  Wear protective gloves/protective clothing/eye protection/face protection.
  P301+P310  IF SWALLOWED: Immediately call a POISON CENTER/doctor.
  P321  Specific treatment (see on this label).
  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.
  P311  Call a POISON CENTER/doctor.
  P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P312  Call a POISON CENTER/doctor if you feel unwell.
  P361+P364  Take off immediately all contaminated clothing and wash it before reuse.
  P333+P313  If skin irritation or rash 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.

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

- Chemical characterisation: Substances
- CAS No. Description
  95-76-1 3,4-dichloroaniline
- Identification number(s)
  - EC number: 202-448-4
  - Index number: 612-202-00-1

4 First aid measures

- Description of first aid measures
  - General information:
    Immediately remove any clothing soiled by the product.
    Remove breathing equipment only after contaminated clothing have been completely removed.
    In case of irregular breathing or respiratory arrest provide artificial respiration.
  - After inhalation:
    Supply fresh air or oxygen; call for doctor.
    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. Then consult a doctor.
  - After swallowing:
    Do not induce vomiting; call for medical help 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: Use fire extinguishing methods suitable to surrounding conditions.
  - 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
  Wear protective equipment. Keep unprotected persons away.
- 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:
  Use neutralising agent.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
7 Handling and storage

- **Handling:**
  - Precautions for safe handling
    - Thorough dedusting.
    - Ensure good ventilation/exhaustion at the workplace.
    - Open and handle receptacle with care.
  - Information about fire - and explosion protection: Keep respiratory protective device available.
- **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/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 eyes.
      - 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.
Trade name: 3,4-Dichloroaniline

- 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: Solid
      Colour: Not determined.
    - Odour: Characteristic
    - Odour threshold: Not determined.
    - pH-value: Not applicable.
  - Change in condition
    Melting point/freezing point: 70-72.5 °C
    Initial boiling point and boiling range: 272 °C
  - Flash point: 135 °C
  - Flammability (solid, gas): Product is not flammable.
  - 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 145 °C: 20 hPa
  - Density at 20 °C: 1.37 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not applicable.
  - Evaporation rate: Not applicable.
  - Solubility in / Miscibility with water: Insoluble.
  - Partition coefficient: n-octanol/water: Not determined.
  - Viscosity:
    Dynamic: Not applicable.
    Kinematic: Not applicable.
  - Solvent content:
    VOC (EC) 0.00 %
Trade name: 3,4-Dichloroaniline

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
    Toxic if swallowed, in contact with skin or if inhaled.
  - LD/LC50 values relevant for classification:
    | ATE (Acute Toxicity Estimates) |
    | Oral LD50 | 545 mg/kg (rat) |
    | Dermal LD50 | 300 mg/kg |
    | Inhalative LC50/4 h | 0.5 mg/L |

- 95-76-1 3,4-dichloroaniline
  - Oral LD50: 545 mg/kg (rat)

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

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behaviour in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
### 13 Disposal considerations

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

<table>
<thead>
<tr>
<th>European waste catalogue</th>
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<tbody>
<tr>
<td>HP 4</td>
<td>Irritant - skin irritation and eye damage</td>
</tr>
<tr>
<td>HP 6</td>
<td>Acute Toxicity</td>
</tr>
<tr>
<td>HP 13</td>
<td>Sensitising</td>
</tr>
<tr>
<td>HP 14</td>
<td>Ecotoxic</td>
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</tbody>
</table>

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

### 14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA: UN3442
- **UN proper shipping name**
  - ADR: 3442 DICHLOOROANILINES, SOLID, ENVIRONMENTALLY HAZARDOUS
  - IMDG: DICHLOOROANILINES, SOLID, MARINE POLLUTANT
  - IATA: DICHLOOROANILINES, SOLID

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

- **Class**: 6.1 Toxic substances.
### Trade name: 3,4-Dichloroaniline

<table>
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<tr>
<th>· Label</th>
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<tr>
<th>· Packing group</th>
<th>ADR, IMDG, IATA</th>
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| · Environmental hazards: |
| · Marine pollutant: | Symbol (fish and tree) |
| · Special marking (ADR): | Symbol (fish and tree) |

| · Special precautions for user |
| · Danger code (Kemler): | 60 |
| · EMS Number: | 6.1-04 |
| · Stowage Category | A |
| · Stowage Code | SW2 Clear of living quarters. |

| · Transport in bulk according to Annex II of Marpol and the IBC Code |
| · Transport/Additional information: |
| · ADR |
| · Limited quantities (LQ) | 500 g |
| · Excepted quantities (EQ) | Code: E4 |
| · Transport category | 2 |
| · Tunnel restriction code | D/E |

| · IMDG |
| · Limited quantities (LQ) | 500 g |
| · Excepted quantities (EQ) | Code: E4 |
| · Transport category | 2 |
| · Tunnel restriction code | D/E |

| · UN "Model Regulation": |
| · UN 3442 DICHLOROANILINES, SOLID, 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 |
| · H2 ACUTE TOXIC |
| · E1 Hazardous to the Aquatic Environment |
| · Qualifying quantity (tonnes) for the application of lower-tier requirements | 50 t |
### Trade name: 3,4-Dichloroaniline

- Qualifying quantity (tonnes) for the application of upper-tier requirements: 200 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.

#### 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. 3: Acute toxicity – Category 3
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1