

Syntor Fine Chemicals Ltd

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE PREPARATION AND COMPANY

1.1 Product identifier: 2-(Dimethylamino)ethyl chloride hydrochloride 65% aqueous solution
Synonyms: 2-Chloro-N,N-dimethylethylamine hydrochloride
REACH Note: This substance has been registered as a transported isolated intermediate and to the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
REACH reference number: 01-2119971284-33-0000

Recommended uses: Intermediate in chemical manufacture
Uses advised against: No information available

1.3 Detail of supplier: Syntor Fine Chemicals Ltd
11 Boleyn Court
Manor Park
Runcorn
WA7 1SR

1.4 Emergency Telephone:
+44 (0) 7720 149 777
Fax: +44 (0) 1928 579 734
e-mail: mr@syntor.co.uk
www.syntor.co.uk

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance:
Classification of substance according to CLP, 1272/2008/EC:



2.2 Label element:

Signal word: Warning

Hazard / Precautionary Statements:

H302 Harmful if swallowed
H341 Suspected of causing genetic defects
H373 May cause damage to organs through prolonged or repeated exposure
H411 Toxic to aquatic life with long lasting effects

2.3 Other Hazards:
Results of PBT and vPvB assessment

P 273 Avoid release to the environment
P 281 Use personal protective equipment as required
P 301 + 312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
PBT: Not applicable
vPvB: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

| Ingredient | CAS Number | EC Number | (% w/w) | Classification according to (EC) No 1272/2008 (CLP) |
|---|------------|-----------|---------|--|
| 2-(Dimethylamino)ethyl chloride hydrochloride | 4584-46-7 | 224-970-1 | ~ 65 % | Acute toxicity (Oral): Cat 4 H302 Harmful if swallowed Germ cell Mutagenicity: Cat 2 H341 Suspected of causing genetic defects STOT –repeated exposure: Cat 2 H373 May cause damage to organs through prolonged or repeated exposure Chronic aquatic toxicity: Cat 2 H411 Toxic to aquatic life with long lasting effects |
| Water | 7732-18-5 | 231-791-2 | ~ 35% | Non applicable |

Molecular formula: $(\text{CH}_3)_2\text{NCH}_2\text{CH}_2\text{Cl}$. HCl
Molecular weight: 144.05

4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: Instantly remove any clothing soiled by the product.
Remove breathing apparatus only after soiled clothing has been completely removed.

Inhalation: Supply fresh air. If required, provide artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep patient warm.
Consult doctor if symptoms persist.

Skin contact: Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

Eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.

Swallowing: Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical advice.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

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

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media:
Suitable extinguishing agents: Use carbon dioxide, sand or extinguishing powder or water jet. For larger fire use water jet or alcohol resistant foam.

For safety reasons unsuitable extinguishing media: None

5.2 Special hazards caused by the material, its products of combustion or flue gases: Can be released in case of fire. Carbon monoxide and carbon dioxide. Nitrogen Oxides (NOx), Hydrogen Chloride (HCl)

5.3 Precautions for fire fighters: Wear self-contained breathing apparatus. Wear full protective suit.

5.4 Further information: Use water spray to cool un opened containers

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Do not allow material to be released to the environment without proper governmental permits

6.3 Methods and materials for containment and cleaning up: Contain spillage. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust) and place in suitable container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections: Dispose of contaminated material according to local / national regulations. See section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling: Avoid exposure - obtain special instructions before use. Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Open and handle container with care.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool location. Store away from oxidizing agents. Keep container tightly sealed.

7.3 Specific use(s): No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:
Derived No Effect Level(DNEL): No information available
Predicted No Effect Concentration (PNEL): No information available

8.2 Exposure controls:
Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Personal protective equipment:
General protective and hygienic measures: The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.

Breathing equipment: Use breathing protection with high concentrations.

Protection of hands: Protective gloves

Eye protection: Tightly sealed safety glasses / full face protection

Body protection: Protective work clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|--|----------------------------------|
| a) Appearance Form: | Colourless to pale yellow liquid |
| b) Odour: | Not determined |
| c) Odour Threshold: | No information available |
| d) pH | 3 - 4 (100g/L @ 20°C) |
| e) Melting point/range: | (contained solid: 203 – 210°C) |
| f) Boiling range: | No information available |
| g) Flash point: | No information available |
| h) Flammability: | No information available |
| j) Upper/lower flammability or explosive limits: | No information available |
| k) Vapour pressure: | No information available |
| l) Vapour density: | No information available |
| m) Relative density: | No information available |
| n) Water solubility: | 2000g/L @ 20°C |
| o) Partition coefficient: | No information available |
| p) Autoignition temperature: | No information available |
| q) Decomposition temperature: | No information available |
| r) Viscosity: | No information available |
| s) Explosive properties: | No information available |
| t) Oxidizing properties: | No information available |

9.2 Other information No relevant information available

10. STABILITY AND REACTIVITY

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| 10.1 Reactivity: | No decomposition if used and stored according to specifications. |
| 10.2 Chemical stability: | Stable under recommended storage conditions. |
| 10.3 Possibility of hazardous reactions: | No dangerous reactions known |
| 10.4 Conditions to avoid: | Incompatible materials |
| 10.5 Incompatible materials: | Oxidizing agent |
| 10.6 Hazardous decomposition products: | Can be released on combustion: Carbon dioxide, carbon monoxide, Nitrogen Oxides (NOx), Hydrogen Chloride (HCl) |

11. TOXICOLOGICAL INFORMATION

| | |
|---|--|
| 11.1 Information on toxicological effects | |
| Acute toxicity: | LD50 orl-rat 500 mg/kg |
| Skin irritation: | Non irritant (rbt exposure time 4 h) |
| Genotoxicity in vitro: | Positive (Ames test, Salmonella typhimurium) Positive (JDS test in vitro, rat hepatocytes) |
| If swallowed: | Harmful if swallowed. |
| Sensitisation: | No sensitising effect known. |
| Additional toxicological information | To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data or carcinogenic properties of this material is available. |

12. ECOLOGICAL INFORMATION

| | |
|--|--|
| 12.1 Toxicity | |
| Aquatic toxicity (100% basis):: | Toxicity to fish (LC50) > 100 mg/l Toxicity to daphnia (E50) 7-8 mg/l Toxicity to algae (ErC50) > 100 mg/l Toxicity to bacteria (E50) >220 mg/l |
| 12.2 Persistence and degradability: | No further relevant information available |
| 12.3 Bioaccumulative potential: | No further relevant information available |
| 12.4 Mobility in soil: | No further relevant information available |
| 12.5 Results of PBT and vPvB assessment: | Not applicable |
| 12.6 Other adverse effects | |
| Additional ecological information: | No further relevant information available |
| General notes: | Toxic to aquatic life with long lasting effects Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits. |

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment method

Substance disposal: Handover to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Waste packaging: Arrange disposal as special waste, by licensed disposal company.
Dispose of as unused product.

14. TRANSPORT INFORMATION

Land transport ADR/RID e GGVS/GGVE (cross-border/domestic)



ADR/RID-GGVS/E Class: 9 Environmentally hazardous substance, liquid, n.o.s.
UN No: 3082
Packaging group: III
Label: 9
Designation of goods: 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-(Dimethylamino)ethyl chloride hydrochloride solution)

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 9
UN No: 3082
Label: 9
Packaging group: III
Correct technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (2-(Dimethylamino)ethyl chloride hydrochloride solution)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 9
UN/ID No: 3082
Label: 9
Packaging group: III
Designation of goods: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-(Dimethylamino)ethyl chloride hydrochloride solution)

15. REGULATORY INFORMATION

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

The substance, 2-Dimethylaminoethyl chloride hydrochloride has been registered as a transported isolated intermediate in accordance with Regulation EC No. 1907/2006 (REACH). REACH reference number: 01-2119971284-33-0000
If you have any comments with respect to the classification and labeling of this substance please contact the lead registrant Syntor Fine Chemicals at the address detailed in section 1.

This product is subject to the International Chemical Weapons Convention.
In the United Kingdom the product is subject to the Chemical Weapons act 1996.

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

15.2 Chemical Safety Assessment: A Chemical Safety Assessment has been carried out for this substance.

Additional information: For use only by technically qualified individuals

16. OTHER INFORMATION

Revision Summary: This issue replaces revision 007. The safety data sheet has been updated to remove reference to the dangerous substances directive 67/548/EEC. There is no change to the classification and labelling of the substance.

The above Information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Syntor Fine Chemicals Ltd, shall not be held liable for any damage resulting from handling or from contact with the above product.
Disclaimer: For R&D use only. Not for drug, household or other uses.

We welcome any additional information about our products that customers have obtained by personal experience.

