### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers
- **Product name**: 1,2-Dichloroethane
- **CAS-No.**: 107-06-2

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against
- **Identified uses**: Laboratory chemicals, Industrial & for professional use only.

#### 1.3 Details of the supplier of the safety data sheet
- **Company**: Central Drug House (P) Ltd
  - 7/28 Vardaan House
  - New Delhi-10002
  - INDIA
- **Telephone**: +91 11 49404040
- **Email**: care@cdhfinechemical.com

#### 1.4 Emergency telephone number
- **Emergency Phone #**: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**
- Flammable liquids (Category 2), H225
- Acute toxicity, Oral (Category 4), H302
- Acute toxicity, Inhalation (Category 3), H331
- Skin irritation (Category 2), H315
- Eye irritation (Category 2), H319
- Carcinogenicity (Category 1B), H350
- Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**
- F Highly flammable R11
  - R45
- Xn Harmful R22
- Xi Irritant R36/37/38
- T Toxic R23

For the full text of the R-phrases mentioned in this Section, see Section 16.
2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H350 May cause cancer.

Precautionary statement(s)

P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing vapours.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 Call a POISON CENTER or doctor/physician.

Supplemental Hazard Statements

Restricted to professional users.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms: Ethylene dichloride

Ethylene chloride

Formula: C₂H₄Cl₂

Molecular weight: 98.96 g/mol

CAS-No.: 107-06-2

EC-No.: 203-458-1

Index-No.: 602-012-00-7

Registration number: 01-2119484658-20-XXXX

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene dichloride</td>
<td>Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>107-06-2</td>
<td>Flam. Liq. 2; Acute Tox. 4; &lt;= 100 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>203-458-1</td>
<td>Acute Tox. 3; Skin Irrit. 2; Eye</td>
</tr>
<tr>
<td>Index-No.</td>
<td>602-012-00-7</td>
<td>Irrit. 2; Carc. 1B; STOT SE 3;</td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119484658-20-XXXX</td>
<td>H225, H302, H315, H319,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H331, H335, H350</td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
</table>
Ethylene dichloride Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

CAS-No. 107-06-2 F, T, Carc. Cat. 2, R45 - R11 - <= 100 %
EC-No. 203-458-1 R36/37/38 - R23 - R22
Index-No. 602-012-00-7
Registration number 01-2119484658-20-XXXX

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
a) Appearance Form: clear, liquid
Colour: colourless

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing point Melting point/range: -35 °C - lit.

f) Initial boiling point and boiling range 83 °C - lit.
**g) Flash point**  
13.0 °C - closed cup - Tested according to Annex V of Directive 67/548/EEC.

**h) Evaporation rate**  
No data available

**i) Flammability (solid, gas)**  
No data available

**j) Upper/lower flammability or explosive limits**  
Upper explosion limit: 16.2 % (V)  
Lower explosion limit: 6.2 % (V)

**k) Vapour pressure**  
33.3 hPa at 0 °C  
86 hPa at 20 °C - Tested according to Annex V of Directive 67/548/EEC.  
312 hPa at 50 °C

**l) Vapour density**  
No data available

**m) Relative density**  
1.256 g/mL at 25 °C - lit.

**n) Water solubility**  
8.69 g/l at 20 °C - Tested according to Annex V of Directive 67/548/EEC.  
- slightly soluble  
10.3 g/l at 56 °C

**o) Partition coefficient: n-octanol/water**  
log Pow: 1.48 at 20 °C - Tested according to Annex V of Directive 67/548/EEC.

**p) Auto-ignition temperature**  
413.0 °C

**q) Decomposition temperature**  
No data available

**r) Viscosity**  
No data available

**s) Explosive properties**  
No data available

**t) Oxidizing properties**  
No data available

9.2 **Other safety information**

- Surface tension  
  - 32.9 mN/m at 15 °C  
  - 32.2 mN/m at 20 °C  
  - 30.8 mN/m at 30 °C

SECTION 10: Stability and reactivity

**10.1 Reactivity**  
No data available

**10.2 Chemical stability**  
Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**  
No data available

**10.4 Conditions to avoid**  
Heat, flames and sparks. Extremes of temperature and direct sunlight.

**10.5 Incompatible materials**  
Strong oxidizing agents

**10.6 Hazardous decomposition products**  
Other decomposition products - No data available  
In the event of fire: see section 5

SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

- **Acute toxicity**
  - LD50 Oral - Rat - 670.0 mg/kg
  - LC50 Inhalation - Rat - 4 h - 3,879 mg/l
  - LD50 Dermal - Rabbit - 2.800 mg/kg

Skin corrosion/irritation
Skin - Rabbit
Result: irritatin - 72 h
(Draize Test)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Moderate eye irritation

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.
Ames test
S. typhimurium
Result: positive

Carcinogenicity
Carcinogenicity - Rat - Oral
Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors. Skin and Appendages: Other: Tumors.
This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
Possible human carcinogen
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylene dichloride)

Reproductive toxicity
Reproductive toxicity - Rat - Inhalation
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: K10525000
Acts as a simple asphyxiant by displacing air., anesthetic effects, Difficulty in breathing, Headache, Dizziness, Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Paresthesia., Drowsiness, Convulsions, Conjunctivitis., Pulmonary edema. Effects may be delayed., Irregular breathing., Stomach/intestinal disorders, Nausea, Vomiting, Increased liver enzymes., Weakness, Heavy or prolonged skin exposure may result in the absorption of harmful amounts of material.

Pancreas.

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 225,00 mg/l - 96 h
NOEC - Cyprinodon variegatus (sheepshead minnow) - 130 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 540,00 mg/l - 24 h

Immobilization EC50 - Daphnia magna (Water flea) - 160 mg/l - 48 h
12.2 Persistence and degradability
Biodegradability  Biotic/Aerobic - Exposure time 21 d
Result: < 20 % - Not readily biodegradable.
Remarks: Not applicable

12.3 Bioaccumulative potential
Bioaccumulation  Lepomis macrochirus (Bluegill) - 14 d
- 95.6 µg/l
Bioconcentration factor (BCF): 2

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1184    IMDG: 1184    IATA: 1184

14.2 UN proper shipping name
ADR/RID: ETHYLENE DICHLORIDE
IMDG: ETHYLENE DICHLORIDE
IATA: Ethylene dichloride

14.3 Transport hazard class(es)
ADR/RID: 3 (6.1)    IMDG: 3 (6.1)    IATA: 3 (6.1)

14.4 Packaging group
ADR/RID: II    IMDG: II    IATA: II

14.5 Environmental hazards
ADR/RID: no    IMDG Marine pollutant: no    IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Authorisations and/or restrictions on use
Ethylene dichloride  CAS-No.: 107-06-2
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
Carcinogenic (article 57a)
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

- Acute Tox. Acute toxicity
- Carc. Carcinogenicity
- Eye Irrit. Eye irritation
- Flam. Liq. Flammable liquids
- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H350 May cause cancer.
- Skin Irrit. Skin irritation

Full text of R-phrases referred to under sections 2 and 3

- F Highly flammable
- T Toxic
- R11 Highly flammable.
- R22 Harmful if swallowed.
- R23 Toxic by inhalation.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R45 May cause cancer.

Further information
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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.