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**SAFETY DATA SHEET**

**1. IDENTIFICATION**

**Product name:** 1,2-Dichloroethane

**Product code:** D0364

**Company:**

**Address:**

**Responsible Department:**

**Telephone:**

**Fax:**

**e-mail:**

**Emergency telephone:**

**Revision number:**

**2. HAZARDS IDENTIFICATION**

**Classification of the substance or mixture**

**PHYSICAL HAZARDS**

**Flammable liquids**

**HEALTH HAZARDS**

**Acute toxicity (Oral)**

**Acute toxicity (Dermal)**

**Acute toxicity (Inhalation)**

**Skin corrosion/irritation**

**Serious eye damage/eye irritation**

**Germ cell mutagenicity**

**Carcinogenicity**

**Specific target organ toxicity**

**- Single exposure [Category 1]**

**Specific target organ toxicity**

**- Single exposure [Category 3]**

**Specific target organ toxicity**

**- Repeated exposure [Category 1] Specific target organ toxicity**

**- Repeated exposure [Category 2] Aspiration hazard**

**ENVIRONMENTAL HAZARDS**

**Acute aquatic hazard**

**Label elements**

**Pictograms or hazard symbols**



**Signal word**

**Hazard statements**

Category 2

Category 4

Category 5

Category 3

Category 2

Category 2B

Category 2

Category 2

Liver Kidney Central nervous system Adrenal gland

Narcotic effects

Liver Thyroid gland Nervous system

Kidney

Category 1

Category 3

Danger

Highly flammable liquid and vapour

Harmful if swallowed

May be harmful in contact with skin

Toxic if inhaled

Causes skin irritation

Causes eye irritation

Suspected of causing genetic defects

Suspected of causing cancer

**Precautionary statements [Prevention]**

**[Response]**

**[Storage]**

**[Disposal]**

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Causes damage to organs : Liver Kidney Central nervous system Adrenal gland

Causes damage to organs through prolonged or repeated

exposure : Liver Thyroid gland Nervous system

May cause damage to organs through prolonged or repeated exposure : Kidney

May cause drowsiness or dizziness

May be fatal if swallowed and enters airways Harmful to aquatic life

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. -No smoking. Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist, vapors or spray.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Do not eat, drink or smoke when using this product.

Wash hands and face thoroughly after handling.

Wear protective gloves, protective clothing, face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Rinse mouth.

IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

If exposed or concerned: Call a POISON CENTER or doctor.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents and container in accordance with local, regional, national regulations.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance/mixture:** Substance

**Components:** 1,2-Dichloroethane

**Percent:** >99.5%(GC)

**CAS RN:** 107-06-[2](#bookmark1)

**Synonyms:** Ethylene Chloride , Ethylene Dichloride

**Chemical Formula:** C2 H4Cl2

**4. FIRST AID MEASURES**

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTER or doctor/physician.

**Skin contact:** Remove/Take off immediately all contaminated clothing. Gently wash with plenty

of soap and water. Call a POISON CENTER or doctor/physician.

**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Call a POISON CENTER or doctor/physician.

**Ingestion:** Call a POISON CENTER or doctor/physician. Rinse mouth.

**Protection of first-aiders:** A rescuer should wear personal protective equipment, such as rubber gloves and

air-tight goggles.

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**5. FIRE-FIGHTING MEASURES**

|  |  |
| --- | --- |
| **Suitable extinguishing** | Dry chemical, foam, water spray, carbon dioxide. |
| **media:** |  |
| **Unsuitable extinguishing** | Solid streams of water |
| **media:** |  |
| **Precautions for firefighters:** | Fire-extinguishing work is done from the windward and the suitable  fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the  surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so. |

**Special protective equipment** When extinguishing fire, be sure to wear personal protective equipment **for firefighters:**

**6. ACCIDENTAL RELEASE MEASURES**

|  |  |
| --- | --- |
| **Personal precautions,** | Use extra personal protective equipment (self-contained breathing apparatus). |
| **protective equipment and** | Keep people away from and upwind of spill/leak. Ensure adequate ventilation. |
| **emergency procedures:** | Entry to non-involved personnel should be controlled around the leakage area by roping off, etc. |
| **Environmental precautions:** | Prevent product from entering drains. |
| **Methods and materials for** | Absorb spilled material in dry sand or inert absorbent before recovering it into an |
| **containment and cleaning** | airtight container. In case of large amount of spillage, contain a spill by bunding. |
| **up:** | Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. |
| **Prevention of secondary** | Remove all sources of ignition. Fire-extinguishing devices should be prepared in |
| **hazards:** | case of a fire. Use spark-proof tools and explosion-proof equipment. |

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Technical measures:** Handling is performed in a well ventilated place. Wear suitable protective

equipment. Prevent generation of vapour or mist. Keep away from

heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.

Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

**Advice on safe handling:** Avoid all contact!

**Conditions for safe storage, including any**

**incompatibilities**

**Storage conditions:**

**Packaging material:**

Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up.

Store away from incompatible materials such as oxidizing agents. Comply with laws.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering controls:**

**Exposure limits:**

**ACGIH TLV(TWA):**

**OSHA PEL(TWA):**

**OSHA PEL(CL):**

Install a closed system or local exhaust. Also install safety shower and eye bath.

10 ppm

50 ppm

100 ppm

**Personal protective equipment**

**Respiratory protection:** Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate

government standards and follow local and national regulations.

**Hand protection:** Impervious gloves.

**Eye protection:** Safety goggles. A face-shield, if the situation requires.

**Skin and body protection:** Impervious protective clothing. Protective boots, if the situation requires.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical state (20°C):**

**Form:**

**Colour:**

**Odour:**

**Odour threshold:**

**pH:**

**Melting point/freezing point:**

**Boiling point/range:**

**Flash point:**

**Flammability or explosive limits:**

**Lower:**

**Upper:**

**Vapour pressure:**

**Vapour density:**

**Relative density:**

**Solubility(ies):**

**[Water]**

**[Other solvents]**

**Miscible:**

**Log Pow:**

**Autoignition temperature:**

Liquid

Clear

Colorless

Characteristic

88 ppm

No data available

No data available

82°C

17°C

6.2%

16%

8.7kPa/20°C

3.42

1.26

Very slightly soluble (0.87g/100mL)

Ether, Alcohols, Chloroform

1.48

440°C

**10. STABILITY AND REACTIVITY**

|  |  |
| --- | --- |
| **Chemical stability:** | Stable under proper conditions. |
| **Possibility of hazardous reactions:** | No special reactivity has been reported. |
| **Conditions to avoid:** | Spark, Open flame, Static discharge |
| **Incompatible materials:** | Oxidizing agents, Bases, Aluminium, Alkali metals, Ammonia, Alkali amides |
| **Hazardous decomposition products:** | Carbon monoxide, carbon dioxide etc |

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity:**

**Skin corrosion/irritation: Serious eye**

**damage/irritation:**

**Germ cell mutagenicity:**

**Carcinogenicity:**

**IARC =**

**NTP =**

**Reproductive toxicity:**

**RTECS Number:**

ihl-man TCLo:4000 ppm/1H

ihl-rat LC50:1000 ppm/7H

orl-hmn LDLo:286 mg/kg

orl-rat LD50:500 mg/kg

skn-rbt LD50:2800 mg/kg

skn-rbt 500 mg/24H MLD

eye-rbt 500 mg/24H MLD

mmo-sat 10 ug/plate (-S9)

mmo-sat 10 umol/plate (+S9)

msc-hmn-lym 100 mg/L

ihl-rat TCLo:5 ppm/7H/78W-I

orl-rat TDLo:5286 mg/kg/69W-I

Group 2B (Possibly carcinogenic to humans)

b (Reasonably anticipated to be carcinogens)

ihl-rat TCLo:57 mg/m3 (24W pre)

ihl-rat TCLo:300 ppm/7H (6- 15D preg)

KI0525000

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**12. ECOLOGICAL INFORMATION**

**Ecotoxicity:**

**Fish:** No data available

**Crustacea:** No data available

**Algae:** No data available

**Persistence / degradability:** 0% (by BOD) , 1.6% (by TOC) , 1. 1% (by GC)

**Bioaccumulative** No data available

**potential(BCF):**

**Mobility in soil**

**Log Pow:** 1.48

**Soil adsorption (Koc):** 33

**Henry's Law (PaM 3/mol):** 120

**13. DISPOSAL CONSIDERATIONS**

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical

incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

**14. TRANSPORT INFORMATION**

|  |  |
| --- | --- |
| **Hazards Class:** | 3: Flammable liquid. |
| **Subsidiary risk:** | 6.1: Toxic substance. |
| **UN-No:** | 1184 |
| **Proper shipping name:** | Ethylene dichloride |
| **Packing group:** | II |

**15. REGULATORY INFORMATION**

**Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011):** Safe use and production, the storage of a dangerous chemical,

transport, loading and unloading were prescribed.

**This product is included in the list of dangerous chemicals(2015)/Serial No.:** 557

**16. OTHER INFORMATION**

**The reference company name of written contents**

|  |  |
| --- | --- |
| **Company:** |  |
| **Address:** |  |
| **Department:** |  |
| **Emergency telephone:** |  |
| **Fax:** |  |

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.

The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added

afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should betaken, in addition to the safety measures suitable for

the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are

familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.