

MATERIAL SAFETY DATA SHEET

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

1.1 Product identifiers

Product name: Dichloromethane
Product code: D004, D032, D168, D181, D491, D507, D511, D526, D997
Brand: LEONID
CAS-No.: 75-09-2
Index No.: 602-004-00-3
REACH No.: 01-2119480404-41-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Leonid Chemicals Pvt. Ltd
Plot No. 30P2, KIADB Industrial Area
Dobaspet – 562111
Taluk – Nelamangala
District – Bangalore Rural
State – Karnataka
India

1.4 Emergency telephone number

Emergency phone number: +91 23377126 / 23378254

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Carcinogenicity (Category 2), H351

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H336

May cause drowsiness or dizziness.

H351

Suspected of causing cancer.

Precautionary statement(s)

P201

Obtain special instructions before use.

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P304 + P340 + P312

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

CENTER/doctor if you feel unwell.

P308 + P313

IF exposed or concerned: Get medical advice/attention.

Supplemental Hazard Statements None

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.

3. Composition/information on ingredients

3.1 Substances

Synonyms: Methylene chloride
Formula: CH_2Cl_2
Molecular weight: 84.93 g/mol
CAS-No.: 75-09-2
EC-No.: 200-838-9
Index-No.: 602-004-00-3

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

Component	Classification	Concentration
Methylene chloride		
	Skin Irrit. 2; Eye Irrit. 2; Carc. 2; STOT SE 3; H315, H319, H351, H336 Concentration limits: 20 %: STOT SE 3, H336;	<= 100 %

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

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. 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

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

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

No data available.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other section

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

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.

Heat sensitive.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value
Workers	Skin contact	Long-term systemic effects	4750mg/kg BW/d
Workers	Inhalation	Acute systemic effects	706 mg/m3
Workers	Inhalation	Long-term systemic effects	353 mg/m3
Consumers	Ingestion	Long-term systemic effects	0.06mg/kg BW/d
Consumers	Inhalation	Long-term systemic effects	83.3 mg/m3
Consumers	Skin contact	Long-term systemic effects	2395mg/kg BW/d
Consumers	Inhalation	Acute systemic effects	353 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment	Value
Soil	0.583 mg/kg
Marine water	0.194 mg/l

Fresh water	0.54 mg/l
Marine sediment	1.61 mg/kg
Fresh water sediment	4.47 mg/kg
Onsite sewage treatment plant	26 mg/l
Aquatic intermittent release	0.27 mg/l

8.2 Exposure control

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 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.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Splash contact

Material: Fluorinated rubber

Minimum layer thickness: 0.7 mm

Break through time: 148 min

Material tested: Vitoject

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, 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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to engine 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--------------------|-------------------|
| a) Appearance | Colourless liquid |
| b) Odour | Ether like |
| c) Odour Threshold | No data available |

d) pH	No data available
e) Melting point/freezing point	Melting point/range: -97.0°C
f) Initial boiling point and boiling range	39.8 – 40.0°C - lit.
g) Flash point	- closed cup does not flash
h) Evaporation rate	0.71
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 22.0%(V) Lower explosion limit: 13.0%(V)
k) Vapour pressure	584 hPa at 25.0°C
l) Vapour density	2.93
m) Relative density	1.325 g/mL at 25°C
n) Water solubility	13,2 g/l at 25°C
o) Partition coefficient: n-octanol/water	log Pow: 1,25 at 20 °C – Bioaccumulation is not expected.
p) Auto-ignition temperature	605.0°C at 1.013 hPa - DIN 51794
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

Relative vapour density	2.93
-------------------------	------

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

No data available

10.5 Incompatible materials

various plastics, Rubber, Light metals, Metals, Mild steel, Strong oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides ,
Hydrogen chloride gas.

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 2.000 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Mouse - 4 h - 86 mg/l

Remarks: (ECHA)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations - 4 h

(OECD Test Guideline 404)

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

Remarks: (ECHA)

Risk of corneal clouding.

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Mutagenicity (mammal cell test): chromosome aberration.

Chinese hamster ovary cells

Result: positive

Ames test

Salmonella typhimurium

Result: positive

OECD Test Guideline 474

Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

Limited evidence of carcinogenicity in animal studies

Suspected human carcinogens

IARC: 2A - Group 2A: Probably carcinogenic to humans (Methylene chloride).

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Acute oral toxicity - Nausea, Vomiting, Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Acute inhalation toxicity - Possible damages: mucosal irritations

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 104 Weeks - No observed adverse effect level - 6 mg/kg

Repeated dose toxicity - Rat - male and female - Inhalation - 104 Weeks

RTECS: PA8050000

Dizziness, Nausea, Vomiting, narcosis, Cough, irritant effects, Unconsciousness, Shortness of breath, respiratory paralysis, somnolence, depressed respiration, CNS disorders, inebriation

Risk of corneal clouding.

The following applies to aliphatic halogenated hydrocarbons in general: sy effect on liver, kidneys.

Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

12.1 Toxicity

Toxicity to fish	Flow through test LC50 - Pimephales promelas (fathead minnow) – 193.00 mg/l 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) – 27.00 mg/l - 24 h (US-EPA)
Toxicity to bacteria	Static test EC50 - activated sludge - 2.590 mg/l - 40 min (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 68% - Readily biodegradable. (OECD Test Guideline 301D)
------------------	--

12.3 Bioaccumulative potential

Bioaccumulation	Cyprinus carpio (Carp) - 6 Weeks - 250 µg/l (Methylene chloride) Bioconcentration factor (BCF): 2 - 5,4 (OECD Test Guideline 305) Cyprinus carpio (Carp) - 6 Weeks - 25 µg/l (Methylene chloride) Bioconcentration factor (BCF): 6 – 40 (OECD Test Guideline 305)
-----------------	--

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

13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other

national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

14. Transport information

14.1 UN number			
ADR/RID: 1593	IMDG: 1593		IATA: 1593
14.2 UN proper shipping name			
ADR/RID: DICHLOROMETHANE			
IMDG: DICHLOROMETHANE			
IATA: Dichloromethane			
14.3 Transport hazard class(es):			
ADR/RID: 6.1	IMDG: 6.1		IATA: 6.1
14.4 Packaging group			
ADR/RID: III	IMDG: III		IATA: III
14.5 Environmental hazards			
ADR/RID: no	IMDG Marine pollutant: no		IATA: no
14.6 Special precautions for user			
No data available			

15. Regulatory information

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

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

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

Methylene chloride

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. Other information

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

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

Further information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Leonid Chemicals Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Leonid Chemicals Pvt. Ltd. has been advised of the possibility of such damages.