



**LEONID CHEMICALS PVT. LTD.,
BANGALORE**

An ISO-9001:2008 Certified Company

Quality Assurance Department

(CODE) DOCUMENT : WI

(CODE) SECTION : WI/SM

(DATE) : 01.04.2013

Issue : 02

Rev.: 00

Title: MATERIAL SAFETY DATA SHEET (MSDS): DICHLOROMETHANE

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SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Dichloromethane

Catalog Numbers: D032, D004, D997, D181

Synonyms: Methylene chloride,

CAS-No. : 75-09-2

Company Information:

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SECTION 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), Respiratory system, Central nervous system, H335, H336

Specific target organ toxicity - repeated exposure, Oral (Category 2), Liver, Blood, H373

Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Central nervous system, H373

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

R40

R36/37/38, R67

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

Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.



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H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed.
H373	May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary statement(s)

P261	Avoid breathing vapours.
P281	Use personal protective equipment as required.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements none

2.3 Other hazards - none

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

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		
CAS-No. 75-09-2 EC-No. 200-838-9 Index-No. 602-004-00-3	Skin Irrit. 2; Eye Irrit. 2; Carc.2; STOT SE 3; STOT RE 2; H315, H319, H335, H336, H351, H373, H373	<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
Methylene chloride		
CAS-No. 75-09-2 EC-No. 200-838-9 Index-No. 602-004-00-3	Xn, Carc.Cat.3, Xi, R36/37/38 - R40 - R67	<= 100 %



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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. 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

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 fire fighting if necessary.

5.4 Further information

no data available



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SECTION 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 sections**
For disposal see section 13.

SECTION 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.
- 7.3 Specific end use(s)**
A part 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
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



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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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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 a full-face respirator with multi-purpose combination (US) or type AXBEK (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 : liquid
Colour : colourless
- b) Odour : no data available
- c) Odour Threshold : no data available
- d) pH : no data available
- e) Melting point/freezing point : -97,0 °C



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- f) Initial boiling point and boiling range : 40,0 °C
- g) Flash point : no data available
- h) Evaporation rate : 0,71
- i) Flammability (solid, gas) : no data available
- j) Upper/lower flammability or explosive limits : Upper explosion limit: 19 %(V)
: Lower explosion limit: 12 %(V)
- k) Vapour pressure : 470,9 hPa at 20,0 °C
- l) Vapour density : 2,93 - (Air = 1.0)
- m) Relative density : 1,32 g/cm³
- n) Water solubility : slightly soluble
- o) Partition coefficient : noctanol/water : log Pow: 1,25
- p) Auto-ignition temperature : 556,1 °C
: 662,0 °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

Relative vapour density 2,93 - (Air = 1.0)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

no data available



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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. Exposure to sunlight.

10.5 Incompatible materials

Alkali metals, Aluminum, Strong oxidizing agents, Bases, Amines, Magnesium, Strong acids and strong bases, Vinyl compounds

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - > 2.000 mg/kg

LC50 Inhalation - rat - 52.000 mg/m³

LD50 Dermal - rat - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - rabbit

Result: Irritating to skin. - 24 h

(Draize Test)

Serious eye damage/eye irritation

Eyes - rabbit

Result: Irritating to eyes. - 24 h

(Draize Test)

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

rat

DNA damage

Carcinogenicity

Carcinogenicity - rat - Inhalation

Tumorigenic: Carcinogenic by RTECS criteria. Endocrine: Tumors.

Limited evidence of carcinogenicity in animal studies

Suspected human carcinogens

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Methylene chloride)



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Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Inhalation - May cause damage to organs through prolonged or repeated exposure.

- Central nervous system

Oral - May cause damage to organs through prolonged or repeated exposure. -

Liver, Blood

Aspiration hazard

no data available

Additional Information

RTECS: Not available

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., 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., Abdominal pain

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 193,00 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) - 1.682,00 mg/l - 48 h

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available



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12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

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: 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

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

no data available



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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.

Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

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

Xn	Harmful
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R67	Vapours may cause drowsiness and dizziness.

SECTION 17 - ADDITIONAL 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.



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Quality Assurance Department

(CODE) DOCUMENT :
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D004

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Issue : 02

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Title: SPECIFICATION MANUAL - DICHLOROMETHANE

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Specification manual – Dichloromethane

CH₂Cl₂

MW: 84.93

Product : Dichloromethane LR
Description : Clear colourless liquid
Cat No : D004
Cas No : 75-09-2
Prepared Date : 23.02.2013
Approved Date : 23.02.2013

REVISION HISTORY

Issue/Rev	Description of Change	Author	Effective Date
01/00	Initial Release	S. Paul Joshua	07.03.2005
02/01	Specification	S. Paul Joshua	23.02.2013
02/02	Included "Description" in the Tests	S. Paul Joshua	17.06.2013
Next Review Due :	02.04.2015		
To be reviewed by :	Head-QC/QA		

Sl. No.	Tests	Specification	Protocol
		LR	
1	Description	Clear colourless liquid	LCPL
2	Assay (GC)	Min 98%	2/4/03
3	Water (H ₂ O)	≤ 0.1%	2/3.1-19
4	Boiling range	38°C - 41°C	2/3.1-03
5	NVM	≤ 0.002 %	2/3.1-01

Approved By: S. Paul Joshua, Head Quality Control and Quality Assurance

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