SAFETY DATA SHEET

Product Name : Dichloromethane CAS No. : 75-09-2 Revision No. : 00

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

1.1 Product identifiers

Product name	:	Dichloromethane
Product Number	:	10159, 10160 , 10005 , 10158 , 10049 , 11524
Brand	:	AZYTUS MATERIAL SCIENCES PVT. LTD
CAS No.	:	75-09-2

1.2 Relevant identified user 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	:	AZYTUS MATERIAL SCIENCES PVT. LTD. Block C, Survey No. 156, 157 & 174, Dhulapally Road, Kompally, Secunderabad – 500014, India

1.4 Emergency telephone number

Emergency Number, #	:	**+91-8418-232316**

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

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
Specific target organ toxicity - single exposure (Category 3), Respiratory system	:	H335
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

2.2 Label elements

Pictogram

Signal word : Warning

Hazard statement(s)

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.
H371	:	May cause damage to organs if inhaled.
H371	:	May cause damage to organs if swallowed.

Precautionary statement(s)

P260	:	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	:	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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 : 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

Substances

Synonyms : Methylene chloride
Formula : CH2Cl2
Molecular Weight : 84.93
CAS-No. : 75-09-2

Hazardous ingredients according to Regulation (EC) No 1272/2008		
Component	**Classification**	**Concentration**
Dichloromethane		
CAS-No 75-09-2	Skin Irrit. 2; Eye Irrit. 2; Carc. 2; STOT SE 3; H315, H319, H351, H336	<= 100 %

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 : Flush eyes with water as a precaution.

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 : No data available

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.

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.

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. Handle and store under inert gas. Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

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

Derived No Effect Level (DNEL)			
Application Area	**Exposure routes**	**Health effect**	**Value**
Workers	Inhalation	Acute systemic effects	706 mg/m3
Workers	Inhalation	Long-term systemic effects	353 mg/m3
Workers	Skin contact	Long-term systemic effects	4750mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects	0.06mg/kg BW/d
Consumers	Inhalation	Long-term systemic effects	88.3 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 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 : 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 148 min

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 enginee 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

Appearance	:	Clear colorless liquid.
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	-97 °C
Initial boiling point and boiling range	:	39.8 -40 °C
Flash point	:	No data available
Evapouration rate	:	0.71
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	Upper explosion limit: 19 %(V) Lower explosion limit: 12 %(V)
Vapour pressure	:	470.9 hPa at 20.0 °C
Vapour density	:	2.93 - (Air = 1.0)
Relative density	:	2.93 - (Air = 1.0)
Water solubility	:	Slightly soluble
Partition coefficient: noctanol/water	:	Log Pow: 1.25
Auto-ignition temperature	:	556.1°C 662.0°C
Decomposition temperature	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Minimum ignition energy	:	No data available
Conductivity	:	No data available
Relative vapour density	:	2.93 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity : No data available

10.2 Chemical stability : Stable under recommended storage conditions.
Contains the following stabilizer(s): 2-Methyl-2-butene (>0.005 - <0.015

%)

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**	:	Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

SECTION 11: Toxicological information

11.1	**Acute toxicity**	:	LD50 Oral - Rat - > 2,000 mg/kg(Methylene chloride) LC50 Inhalation - Rat - 4 h - 60.14 mg/l(Methylene chloride) LD50 Dermal - Rat - > 2,000 mg/kg(Methylene chloride) (OECD Test Guideline 402)
	Skin corrosion/irritation	:	Skin - Rabbit(Methylene chloride) Result: Irritating to skin. - 4 h (OECD Test Guideline 404)
	Serious eye damage/eye irritation	:	Eyes - Rabbit(Methylene chloride) Result: Irritating to eyes.
	Respiratory or skin sensitisation	:	- Mouse(Methylene chloride) Did not cause sensitisation on laboratory animals. (OECD Test Guideline 429)
	Germ cell mutagenicity	:	Chromosome aberration test in vitro(Methylene chloride) Result: positive Ames test(Methylene chloride) Salmonella typhimurium Result: positive OECD Test Guideline 474(Methylene chloride) Mouse - male and female - Bone marrow
	Carcinogenicity	:	Limited evidence of carcinogenicity in animal studies(Methylene chloride) Suspected human carcinogens(Methylene chloride) IARC: 2A - Group 2A: Probably carcinogenic to humans (Methylene chloride)
	Reproductive toxicity	:	No data available(Methylene chloride)
	Specific target organ toxicity - single exposure	:	May cause drowsiness or dizziness.(Methylene chloride)
	Specific target organ toxicity - repeated exposure	:	No data available
	Aspiration hazard	:	No data available(Methylene chloride)
	Additional Information	:	Dichloromethane is metabolized in the body producing carbon monoxide which 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(Methylene chloride) To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Methylene chloride)

SECTION 12: Ecological information

12.1 Toxicity : Toxicity to fish
LC50 - Pimephales promelas (fathead minnow) - 193.00 mg/l - 96 h(Methylene chloride)

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h(Methylene chloride)

12.2 Persistence and degradability : Biodegradability
Aerobic - Exposure time 28 d(Methylene chloride)
Result: 68 % - Readily biodegradable.
(OECD Test Guideline 301D)

12.3 Bioaccumulative potential : Does not bioaccumulate.

12.4 Mobility in soil : No data available(Methylene chloride)

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**
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
UN number	1593	1593	1593
UN proper shipping name	DICHLOROMETHANE	DICHLOROMETHANE	Dichloromethane
Transport hazard class(es)	6.1	6.1	6.1
Packaging group	III	III	III
Environmental hazard	No	No	No
Special precautions for user	No data available	No data available	No data available

SECTION 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.

15.2 Chemical Safety Assessment : For this product a chemical safety assessment was not carried out

SECTION 16: Other information

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Version : 00

Disclaimer:

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