	MATERIAL SAFETY DATASHEET	MSDS No.	02
	METHYLENE CHLORIDE	Effective From	06/07/2023

SECTION 1: IDENTIFICATION OF SUBSTANCE OR MIXTURE AND COMPANY

1.1	Product Name	:	Methylene Chloride
	Trade Names / Synonyms	:	MC; Dichloromethane (DCM); Methylene dichloride; Methylene bichloride; Methane Dichloride
	CAS Number	:	75-09-2
	Reach number:	:	01-2119480404-41-xxxx
1.2	Manufacturer/supplier	:	Bloomchemag BV Sint-Antoniusstraat 16 b1, B-2400, Mol, Belgium, BTW BE 0544.589.474
	Further information obtainable from:	:	bd@bloomchemag.com
1.3	Emergency Call		
	Emergency Contact	:	Mahima Pundir +91-7291999329

Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against

Identified Uses:	:	Commonly used as solvent
Uses advised against:	:	Do not use product for anything outside of the above specified uses
Only Representative:	:	Global Product Compliance (Europe) AB, IDEON, Beta 5, Scheelevägen 17, 22363, Lund, Sweden

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of Substance or mixture Classification according to Regulation (EC) No 1272/2008

SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
 CARCINOGENICITY - Category 2
 Specific target organ toxicity (single exposure) - Category 3
 {Target Organs - Central nervous system (CNS)}

2.2 Lable element

Hazard Pictogram:



Single 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

Precautinary Statement(s):

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P264	Wash face, hands and any exposed skin thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required
P391	Collect spillage
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove lenses, if present and easy to do. Continue rinsing

Other Hazards:

The substance does not meet the criteria for classification as PBT or vPvB in accordance with Annex XIII of the REACH Regulation. The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS**3.1 Substance**Chemical Formula : CH₂Cl₂

Chemical name	CAS No. / REACH Registration No. / EC No.	Classification according to Regulation (EC) No. 1272/2008	Concentration % (w/w)
Methylene chloride	75-09-2 /	SKIN CORROSION / IRRITATION - Category 2; SERIOUS EYE DAMAGE/ EYE	>= 99.9 - <= 100

	01-2119480404-41-0022 / 200-838-9	IRRITATION - Category 2; CARCINOGENICITY - Category 2; Specific target organ toxicity (single exposure) - Category 3 {Target Organs - Central nervous system (CNS)}	
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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/ consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get Medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed

person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

Potential acute health effects

Eye contact : Causes serious eye irritation
 Inhalation : No known significant effects or critical hazards.
 Ingestion : No known significant effects or critical hazards
 Inhalation : No known significant effects or critical hazards.
 Ingestion :

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following:, pain or irritation, watering, redness
Inhalation	No specific data
Skin contact	Adverse symptoms may include the following:, irritation, redness
Ingestion	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: In case of inhalation of decomposition products in a fire, symptoms may be delayed.
Specific treatments	: No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or Self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

SECTION 5. FIRE FIGHTING MEASURE

- 5.1 **General Fire Hazards** : Heat may cause the containers to explode.
- 5.1 **Extinguishing media Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire. Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.
- 5.2 **Special hazards arising from the substance or mixture** : Thermal decomposition can lead to release of irritating gases and vapors. Keep product and

		empty container away from heat and sources of ignition
5.3	Hazardous Combustion Products :	If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition, Carbon monoxide (CO) Carbon dioxide (CO ₂) Hydrogen chloride gas Phosgene
5.4	Advice for firefighters Special fire fighting procedures: :	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Wear neoprene gloves during cleaning up work after a fire. Exposure to decomposition products may be a hazard to health.
	:	In case of fire: Stop leak if safe to do so. Continue water spray from protected position until container stays cool. Use extinguisher to contain the fire. Isolate the source of the fire or let it burn out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
5.5	Special protective equipment for firefighters: :	Fire-fighters must use standard protective equipment including flame retardant coat, helmet with face shield, Gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures :	Evacuate area. Provide adequate ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Do not inhale vapors, mist or gas. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
6.2	Environmental Precautions :	Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.
6.3	Methods and material for containment and cleaning up :	Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers closed when finished.
6.4	Reference to other sections :	Refer to sections 8 and 13.

SECTION 7: HANDLING & STORAGE

7.1	Precautions for safe handling: :	Only experienced and properly instructed persons should handle containners. Handle in accordance with good industrial hygiene and safety practice. Use proper personal protective equipment when handling material to prevent contact with skin and eyes. Do not inhale vapor or mist.
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- 7.2 **Conditions for safe storage, including any incompatibilities:** : Observe all regulations and local requirements regarding storage of containers. Protect from sunlight. Store in a well-ventilated place. Containers should not be stored in conditions likely to encourage corrosion. Do not store in aluminum containers.
- 7.3 **Storage temperature** : Protect from sunlight. Store in a cool and well-ventilated place.
- 7.4 **Storage period** : No data available

SECTION 8 : EXPOSURE CONTROL / PERSONAL PROTECTION CONTROL PARAMETERS

8.1 Occupational Exposure Limits:

Region	Long-term Exposure Limit (LTEL) Values	Short-term Exposure Limit (STEL) Values
European Union	353.0 mg/m ³ 100.0 ppm	706.0 mg/m ³ 200.0 ppm

8.2 Exposure controls

Engineering controls : Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

Hand protection : Protective gloves. Inspect gloves before use. Observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) Gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitization effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Use gloves with care avoiding skin contamination.

Eye/Face protection : Use tightly sealed safety glasses. (European Standard - EN 166)

Large Scale/emergency use : Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended Filter type: low

Small scale/Laboratory use	:	boiling organic solvent Type AX Brown conforming to EN371 Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted
Environmental exposure controls	:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9 : PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Clear colorless liquid
Physical state	:	Liquid.
Colour	:	Colourless
Odor	:	Chloroform-like odour, sweet
Molecular Weight	:	84.93 g/mol
pH (15 aqueous solution)	:	Specific data not available
Melting point/freezing point	:	-97 °C / -142.6 °F
Initial boiling point and boiling range	:	39 °C (102.2 °F)
Evaporation Rate	:	27.5 (Ether = 1.0)
Flash point	:	Not applicable
Flammability (solid, gas)	:	Not applicable
Viscosity	:	0.42 mPas @ 25°C
Partition coefficient; n-octanol/water	:	No data available
Vapour pressure	:	350 mbar @ 20 °C
Vapour density	:	2.93 (Air = 1.0)
Specific Gravity	:	1.33
Flammability Range	:	UEL=23 Vol % & LEL=13 Vol%%
Auto-ignition temperature	:	556 °C / 1032.8 °F
Decomposition temperature	:	Specific data not available
Water..solubility	:	1.32 gm/100 gm water @ 20°C
Partition coefficient n-octanol/water(ies)	:	No data available

SECTION 10: STABILITY & REACTIVITY

10.1	Reactivity	:	None known, based on information available
10.2	Chemical stability	:	Stable under ordinary conditions of use and storage.
10.3	Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur
10.4	Conditions to avoid	:	The product is not flammable in air under ambient conditions of temperature and pressure. When pressurised with air or oxygen, the mixture may become flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions.
10.5	Incompatible materials	:	Strong oxidizers, strong caustics, plastics, rubber, nitric acid, water + heat, and chemically active metals, such as aluminium & magnesium powder, sodium, potassium, and lithium. Avoid contact with open flames and electrical arcs. Liquid methylene chloride will attack some forms of plastics, rubber, and coatings
10.6	Hazardous decomposition products	:	Emits highly toxic fumes of phosgene when heated to decomposition. Decomposes in a flame or hot surface to form toxic gas phosgene and corrosive mists of hydrochloric acid. Carbon dioxide and carbon monoxide may form when heated to decomposition

SECTION 11 : TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Actuate Toxicity**

LC50 inhalation rat (mg/l)	86 mg/L (4hour)
LD50 Oral	> 2000 mg/kg (Rat)
LD50 Dermal	> 2000 mg/kg (Rat)

Local effect**Inhalation:** May cause drowsiness or dizziness**Eye contact:** Causes serious eye irritation**Skin contact:** Causes skin irritation**Ingestion:** Based on available information, the classification criteria are not met.**Chronic toxicity****Skin Corrosion/Irritation:** Causes skin irritation**Eye damage/irritation:** Causes serious eye irritation**Sensitization:** Based on available information, the classification criteria are not met**Mutagenic effects:** Not classifiable

Carcinogenic effects: Suspected of causing cancer

Reproductive effects: Based on available information, the classification criteria are not met.

STOT - Single Exposure: May cause drowsiness or dizziness.

STOT - repeated exposure: Based on available information, the classification criteria are not met.

Aspiration hazard: Based on available information, the classification criteria are not met.

11.2 Information on other hazards

Endocrine Disrupting Properties : The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605.

SECTION 12 : ECOLOGICAL INFORMATION

12.1- Toxicity

Product /ingredient name	Result	Species	Exposure
Methylene chloride	EC50: > 660 mg/L	Freshwater Algae Pseudokirchneriella subcapitata)	96 hours
	LC50:193 mg/L	Freshwater Fish- Pimephales promelas	96 h Flow through
	EC50: 1 mg/L	Microtox	24 hours
	EC50 : 2.88 mg/L	Microtox	15 Minutes
	EC50:140 mg/L	Water Flea (Daphnia magna)	48 h Static

12.2-Persistence and degradability

Persistence and degradability	Persistence is unlikely based on information available.
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12.3-Bioaccumulative potential

BCF fish	No information available
Log Pow	1.25
Log Kow	Not applicable
Bioaccumulative potential	No information available

12.4-Mobility in Soil

Mobility in soil	Is not likely mobile in the environment due its low water solubility.
Ecology - soil	Will likely be mobile in the environment due to its volatility

12.5-Other adverse effect

No known significant effects or critical hazards

12.6-Endocrine disrupting properties-Endocrine Disruptor Information

The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605.




SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste from Residues / Unused Products : Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging : Do not reuse empty containers. Dispose of this container to hazardous or special waste collection point.

SECTION 14: TRANSPORT INFORMATION

ITEM	Land transport (ADR)	Sea transport (IMDG)	Air transport (IATA)
UN number	1593	1593	1593
Proper shipping name	DICHLOROMETHANE	DICHLOROMETHANE	Dichloromethane
Transport hazard class(es)/ Labelling Number	 6.1	 6.1	 6.1
Packaging Group	III	III	III
Environmental hazards	No	No	No

Additional information

Other information : No supplementary information available

Special transport precautions : Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

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.

Annex XVIII of REACH (EC Regulation n. 1907/2006)

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
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Dichloromethane (CAS 75-09-2)	-	Use restricted. See entry no 59, 3 and 75 https://echa.europa.eu/documents/10162/0ea58491-bb76-4a47-b1d2-36faa1e0f290/	-
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International regulations

Europe - EINEC / ELINCS	200-838-9
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15.2 Chemical Safety Assessment

For this product, a chemical safety assessment was carried out. Refer Annexure for Exposure scenarios.

SECTION 16: OTHER 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. SRF Limited-Chemical business shall not be held liable for any damage resulting from handling or from contact with the above product.