

This product safety summary is intended to provide a general overview of the chemical substance in the context of ICCA global product strategy. It is not intended to provide emergency response, medical or treatment information nor to provide an overview of all safety and health information. This summary is not intended to replace the Safety Data Sheet. For detailed guidance on the use or regulatory status of this substance, please consult the Safety Data Sheet.

## **A. CHEMICAL PRODUCT IDENTIFICATION:**

Product Name	Methylene Dichloride
Synonyms	Dichloromethane
IUPAC Name	Dichloromethane
CAS NO	75-09-2
E C No	200-838-9
Molecular Formula	CH <sub>2</sub> Cl <sub>2</sub>

## **B. USES AND APPLICATIONS:**

- ✓ Methylene dichloride is used as a solvent, especially where high volatility is required. It is a good solvent for oils, fats, waxes, resins, bitumen, rubber and cellulose acetate and is a useful paint stripper and degreaser. It is used in paint removers, in propellant mixtures for aerosol containers, as a solvent for plastics, as a degreasing agent, as an extracting agent in the pharmaceutical industry and as a blowing agent in polyurethane foams. Its solvent property is sometimes increased by mixing with methanol, petroleum naphtha or tetrachloroethylene.

## **C. PHYSICAL / CHEMICAL PROPERTIES:**

Properties	Value
Physical state and appearance	Colorless liquid
Odor	Aromatic sweet
Molecular Weigh	84.93 g/mol
Color:	Colorless
Boiling Point / Range	40 °C / 104 °F
Melting Point / Range	-95 °C / -139 °F

Flash Point	Not information available
Specific Gravity	1.32 g/cm <sup>3</sup> at 25 °C
Critical Temperature	No information available
Relative Density	1.32 g/cm <sup>3</sup> at 25°C
Vapor Pressure	58.4 kPa at 25°C
Vapor Density	No information available
Volatility	No information available
Odor Threshold	No information available
Partition Coefficient	1.25 at 25°C
Water Solubility	13.2 g/l at 25 °C
Explosive/oxidising properties	Explosive limits Upper: 22 vol% Lower: 13 vol%

#### **D. HEALTH EFFECTS:**

Effect	Value
Acute Toxicity Oral / inhalation / dermal	ORAL LD50: >2000 mg/kg DERMAL LD50: >2000 mg/kg INHALATION LC50: 86 mg/L  Based on available information, According to GHS product is not classified as Acutely Toxic.
Irritation / corrosion Skin / eye/ respiratory tract	Causes skin irritation and serious eye irritation. May cause drowsiness or dizziness if inhaled.
Sensitisation	Based on available information, the classification criteria are not met.
Toxicity after repeated exposure Oral / inhalation / dermal	Based on available information, the classification criteria are not met.
Genotoxicity / Mutagenicity	Not classified.
Carcinogenicity	Suspected of causing cancer.
Toxicity for reproduction	Based on available information, the classification criteria not met.

## **E. ENVIRONMENTAL EFFECTS:**

Dichloromethane production and use as a solvent in paint removers and other solvent applications, in degreasing and cleaning fluids, in aerosols and as a chemical intermediate may result in its release to the environment through various waste streams.

Effect Assessment	Value
Aquatic Toxicity	Toxicity to Fish LC50: 193 mg/L Toxicity to aquatic Invertebrate EC50: 27 mg/L Toxicity to Algae EC10: 550 mg/L  Based on available information, according to GHS product is not classified for Aquatic Toxicity.

Fate and behaviour	Value
Degradation/Persistence	Persistence is unlikely based on available information.
Bio-accumulation	Log Kow = 1.25 at 20°C Bio-concentration factor (BCF): 6.4 - 40 Bio-accumulation is unlikely.
PBT/vPvB conclusion	This substance/mixture contains no components considered to be either persistent, bio-accumulative and toxic (PBT) or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.

\*: Persistent, Bio accumulative and Toxic (PBT)

\*\*: very Persistent and very Bio accumulative (vPvB)

## **F. EXPOSURE :**

Human health	
Consumers	Exposure routes for consumers using Methylene chloride-containing products may include inhalation of vapors, mists and aerosols (e.g., aerosols from spray applications), dermal exposure to products and oral exposure to mists that deposit in the upper respiratory tract and are swallowed.
Workers	CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA.

	<p>Classified 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system, liver, mucous membranes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.</p>
--	--

#### Environment

When released into the soil, this material may leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of greater than 30 days. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

#### Environmental Toxicity:

The LC50/96-hour values for fish are over 100 mg/l. This material is not expected to be toxic to aquatic life.

## G. RISK MANAGEMENT MEASURES

Effect	Value
Eyes	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin protection	Wash off immediately with soap and plenty of water for at least for 15 minutes. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention.
Ingestion	Do NOT induce vomiting. Call a physician or poison control centre immediately.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Does not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of

	a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
--	--

## **H. PERSONAL PROTECTIVE EQUIPMENT AND EMERGENCY MEASURES**

Effect		Value
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. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.
Special risks, Specific hazards		Thermal decomposition can lead to release of irritating gases and vapours. Keep product and empty container away from heat and source of ignition.
Personnel Protective equipment	Eye/Face protection	Use tightly sealed safety glasses. (European Standard - EN 166)
	Skin protection	Impervious long-sleeved clothing. Preventative skin protection is recommended.
	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. gloves with care avoiding skin contamination.
	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.

## **I. ACCIDENTAL RELEASE MEASURES**


- ✓ Use proper personal protective equipment (pl refer MSDS)
- ✓ Person Precautions: Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8. Avoid contact with skin and eyes and inhalation of vapors. Use personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment. In case of leak, wear a self-contained breathing apparatus.
- ✓ Spill cleanup measures: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## **J. FIRE FIGHTING MEASURES**

Suitable Extinguishing Media	Use extinguishing media appropriate for local surroundings. Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam.
------------------------------	---

## **K. CLASSIFICATION AND LABELLING**

Under GHS substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the eSDS. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use. Substances registered for REACH are classified according CLP (EC) 1272/2008, implementation of the GHS in the European Union.

Classification H315 H319 H351 H336	Causes skin irritation Causes serious eye irritation Suspected of causing cancer May cause drowsiness or dizziness
Pictogram	
Signal Word	Warning
Hazard statements H315 H319 H351	Causes skin irritation Causes serious eye irritation Suspected of causing cancer

H336	May cause drowsiness or dizziness
Precautionary statements P201 P202  P261 P264  P271 P280  P308+P313  P304+P340  P302+P352 P332+P313  P363+P364  P305+P351+P338  P337+P313  P311 P402+P233  P405 P501	Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapours/spray Wash face, hands and exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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/attention. Call a POISON CENTER or doctor/physician. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to comply with local, state and federal regulation.

## **L. BASIC TRANSPORT INFORMATION**

DOT / TDG/ IATA/ IMDG/IMO	
UN No.	UN1593
Proper shipping Name	Dichloromethane

Technical name	Dichloromethane
Hazard Class	6.1
Packaging Group	III

## **M. REGULATORY INFORMATION**

### **✓ International Inventories**

TSCA	Complies
EINECS/ ELINCS	Complies
DSL/NDSL	Complies
PICCS	Complies
ENCS	Complies
IECSC	Complies
AICS	Complies
KECL	Complies

### **Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

## **N. CONCLUSIONS**

- ✓ Methylene dichloride is used as a solvent, especially where high volatility is required.
- ✓ Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
- ✓ By applying the appropriate Risk Management measures the concentrations to be expected at workplaces and to the general public are below recommended exposure



limits

## **O. CONTACT INFORMATION**

Company Name	GUJARAT FLUOROCHEMICALS LIMITED
Address	12/A, GIDC Dahej Industrial Estate, Taluka: Vagra, Bharuch 392 130, Gujarat, India
Business Phone	+91 – 2641 – 618031, 248152
Business Fax	+91 – 2641 – 618012
Web Site	<a href="http://www.gfl.co.in">www.gfl.co.in</a>

## **P. DISCLAIMER**

- ✓ The information contained in this paper is intended as advice only and whilst the information is provided in utmost good faith and has been based on the best information currently available, is to be relied upon at the user's own risk.
- ✓ NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.