

1. Identification

Product identifier	DICHLOROMETHANE, REAGENT (ACS)		
Other means of identification			
Product code	909		
CAS number	75-09-2		
Synonyms	METHYLENE CHLORIDE		
Recommended use	professional, scientific and technical activities: other professional, scientific and technical activities		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company name	GFS Chemicals, Inc.		
Address	800 Kaderly Drive Columbus, OH 43228 United States		
Telephone	Phone	740-881-5501	
	Toll Free	800-858-9682	
	Fax	740-881-5989	
Website	www.gfschemicals.com		
E-mail	service@gfschemicals.com		
Emergency phone number	Emergency Assistance	Chemtrec 800-424-9300	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause cancer. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
DICHLOROMETHANE	METHYLENE CHLORIDE	75-09-2	100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations.

Large Spills: Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Never return spills in original containers for re-use.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Material	Type	Value
DICHLOROMETHANE (CAS 75-09-2)	STEL	125 ppm
	TWA	25 ppm

US. ACGIH Threshold Limit Values

Material	Type	Value
DICHLOROMETHANE (CAS 75-09-2)	TWA	50 ppm

Biological limit values

ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
DICHLOROMETHANE (CAS 75-09-2)	0.3 mg/l	Dichloromethane	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	strong characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-139 °F (-95 °C)
Initial boiling point and boiling range	103.55 °F (39.75 °C) 101.325 kPa
Flash point	Does not flash by standard methods.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	15.5 %
Flammability limit - upper (%)	66.4 %
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	58 kPa (77 °F (25 °C))
Vapor density	2.93
Relative density	Not available.
Solubility(ies)	
Solubility (water)	20 g/l
Partition coefficient (n-octanol/water)	1.25
Auto-ignition temperature	1033 °F (556.11 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.33 g/cm ³ estimated at 20 °C
Dynamic viscosity	0.43 mPa.s (68 °F (20 °C))
Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	2.1 kJ/g
Kinematic viscosity	0.3244 mm ² /s estimated
Molecular formula	CH ₂ Cl ₂
Molecular weight	84.93 g/mol
Oxidizing properties	Not oxidizing.
Percent volatile	100 %
Specific gravity	1.33 at 20 °C
Surface tension	28.12 mN/m (68 °F (20 °C))
VOC	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. None known. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen chloride. Phosgene

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity	Harmful if swallowed.
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Product	Species	Test Results
DICHLOROMETHANE (CAS 75-09-2)		
<u>Acute</u>		
Inhalation		
LC50	Guinea pig	11600 mg/l, 6 Hours
		40.2 mg/l, 6 Hours
	Mouse	14400 mg/l, 7 Hours
		56.23 mg/l, 7 Hours
		51.5 mg/l, 2 Hours
	Rat	49.1 mg/l, 6 Hours
		2000 mg/l, 15 Minutes
		79 mg/l, 2 Hours
		52 mg/l, 6 Hours
		16000 mg/l, 7 Hours
LD50	Mouse	
Oral		
LD50	Rat	3000 mg/kg
		1600 mg/kg
Other		
LD50	Mouse	6460 mg/kg
		437 mg/kg

Skin corrosion/irritation	Causes skin irritation.
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Serious eye damage/eye irritation	Causes serious eye irritation.
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Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	May cause cancer.
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IARC Monographs. Overall Evaluation of Carcinogenicity

DICHLOROMETHANE (CAS 75-09-2)	2A Probably carcinogenic to humans.
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OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

DICHLOROMETHANE (CAS 75-09-2)	Cancer
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US. National Toxicology Program (NTP) Report on Carcinogens

DICHLOROMETHANE (CAS 75-09-2)	Reasonably Anticipated to be a Human Carcinogen.
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Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Causes damage to organs. May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Product	Species		Test Results
DICHLOROMETHANE (CAS 75-09-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1250 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	140.8 - 277.8 mg/l, 96 hours

Persistence and degradability	None known.
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Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)
1.25

Mobility in soil	No data available.
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Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.
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13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of as hazardous waste in compliance with local and national regulations.
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Local disposal regulations	Dispose in accordance with all applicable regulations.
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Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company. U080: Waste Methylene chloride
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US RCRA Hazardous Waste U List: Reference

DICHLOROMETHANE (CAS 75-09-2)	U080
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Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
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Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
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14. Transport information

DOT

UN number	UN1593
UN proper shipping name	Dichloromethane
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Label(s)	6.1
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, IP8, N36, T7, TP2
Packaging exceptions	153
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN1593
UN proper shipping name	Dichloromethane
Transport hazard class(es)	
Class	6.1(PGIII)

Material name: DICHLOROMETHANE, REAGENT (ACS)

Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	6L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1593
UN proper shipping name	DICHLOROMETHANE
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-A
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

DICHLOROMETHANE (CAS 75-09-2) 0.1 % Annual Export Notification required.

CERCLA Hazardous Substance List (40 CFR 302.4)

DICHLOROMETHANE (CAS 75-09-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

DICHLOROMETHANE (CAS 75-09-2)

- Cancer
- Heart
- Central nervous system
- Liver
- Skin irritation
- Eye irritation

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312

Yes

Hazardous chemical**Classified hazard categories**

Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
DICHLOROMETHANE	75-09-2	100

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

DICHLOROMETHANE (CAS 75-09-2)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Clean Water Act (CWA)
Section 112(r) (40 CFR
68.130)**

Priority pollutant

**Safe Drinking Water Act
(SDWA)**

0 mg/l
0.005 mg/l

US state regulations**California Proposition 65**

WARNING: This product can expose you to DICHLOROMETHANE, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

DICHLOROMETHANE (CAS 75-09-2)

Listed: April 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

DICHLOROMETHANE (CAS 75-09-2)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision**Issue date** January-26-2015**Revision date** June-15-2018**Version #** 02

Disclaimer

GFS Chemicals, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.