



Safety Data Sheet

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Section 1 - Identification

1.1 Product Identifier

Product Name : Dichloromethane

CAS No. : 75-09-2

1.2 Relevant identified uses 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 : 9920 Pacific Heights Blvd
Suit 150
San Diego
California -92121

1.4 Emergency Telephone number

Emergency phone : +1 (858) 245-0283

Section 2: Hazard Identification

2.1 Classification of the substance or the mixture

Skin irritation	Category 2	H315:Causes skin irritation.
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Eye irritation	Category 2	H319:Causes serious eye irritation.
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Carcinogenicity	Category 2	H351:Suspected of causing cancer.
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Specific target organ toxicity -single exposure	Category 3	H336:May cause drowsiness or dizziness.
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2.2 Label elements

Label according Regulation (EC) 1272/2008

Hazard Pictogram



Signal Word:
DANGER

Hazard statements

- | | |
|------|------------------------------------|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |

Precautionary statements

Prevention

- | | |
|------|---|
| P202 | Do not handle until all safety precautions have been read and understood. |
| P261 | Avoid breathing mist or vapours. |
| P264 | Wash skin thoroughly after handling. |

Response

- | | |
|----------------|--|
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+P313 | IF exposed or concerned: Get medical advice/ attention. |

Reduced Labelling (<= 125 ml)

Hazard Pictogram



Signal Word:
DANGER

Hazard Statements

H351 Suspected of causing cancer.

Precautionary Statements

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/ attention.

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.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 3: Composition/information on ingredients

3.1 Substance

Substance name : Methylene chloride
Index-No. : 602-004-00-3
EC-No. : 200-838-9

Section 4: First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water.
Call in ophthalmologist.
Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most).
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 labeling (see section 2.2) and/or in section 11.

4.3 Indications of any immediate medical attention and special treatment needed

No data available

Section 5: Firefighting measures

5.1 Extinguishing Media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazard arising from the substance or mixture

Specific hazards during fire fighting : Not combustible.
Ambient fire may liberate hazardous vapours.

Hazardous combustion products : Carbon oxides
Hydrogen chloride gas

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:
Do not breathe vapours, aerosols.

Avoid substance contact.
Ensure adequate ventilation.
Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environment precautions

Environmental precautions : Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Work under hood. Do not inhale substance/mixture.
Avoid generation of vapours/aerosols.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions : Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Storage class (TRGS 510) : 6.1D, Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Further information on storage stability : Heat sensitive.

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

Occupational Exposure Limits

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Methylene chloride	Workers	Inhalation	Acute systemic effects	706 mg/m ³
	Workers	Inhalation	Long-term systemic effects	353 mg/m ³
	Workers	Skin contact	Long-term systemic effects	4750 mg/kg BW/d
	Consumers	Ingestion	Long-term systemic effects	0.06 mg/kg BW/d
	Consumers	Inhalation	Long-term systemic effects	88.3 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	2395 mg/kg BW/d
	Consumers	Inhalation	Acute systemic effects	353 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Methylene chloride	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

Personal protective equipment

Eye/face protection	: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Hand protection	
Material	: Viton®
Break through time	: 120 min
Glove thickness	: 0.7 mm
Protective index	: Splash contact
Manufacturer	: Vitoject® (KCL 890 / Aldrich Z677442, Size M)
	:
Material	: Nitrile rubber
Break through time	: 30 min
Glove thickness	: 0.11 mm
Protective index	: Splash contact
Manufacturer	: KCL 741 Dermatrill® L
Remarks	: This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Skin and body protection	: protective clothing
Respiratory protection	: required when vapours/aerosols are generated.
Recommended protection	: Filter AX (EN 371)
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory	

protective devices are carried out according to the instructions of the producer.
These measures have to be properly documented.

Environmental exposure controls

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Color	: Colourless
Odor	: ether-like
Odor Threshold	: 250 ppm
Melting point/range	: -97 °C
Boiling point/boiling range	: 39.8 - 40 °C
Flammability	: Not data available
Upper explosion limit / Upper flammability limit	: Upper flammability limit 22 %(V)
Lower explosion limit / Lower flammability limit	: Lower flammability limit 13 %(V)
Flash point	: does not flash
Autoignition temperature	: 556.1 °C
Decomposition temperature	: Not data available
pH	: No data available
Viscosity,dynamic	: 0.42 mPa.s (25 °C)
Viscosity,Kinematic	: No data available
Flow time	No data available

Solubility(ies)	: 13.2 g/l (23,5 °C)
Water solubility	pH: 7
Partition coefficient n-octanol/water	: log Pow: 1,25 (20 °C) pH: 7 Method: (experimental) Bioaccumulation is not expected.
Vapor pressure	: 584 hPa (25 °C)
Relative density	: No data available
Density	: 1.325 g/cm3 (25 °C)
Relative vapour density	: 2.93

9.2 Other information

Explosives	: Not classified as explosive
Oxidizing properties	: None
Burning rate	: No data available
Self-ignition	: 605 °C 1.013 hPa Method: DIN 51794
Evaporation rate	: 0.71
Refractive index	: 1.42 at 20 °C 589.3 nm
Molecular weight	: 84.93 g/mol

Section 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Sensitivity to light

The product is chemically stable under standard ambient conditions (room temperature) .

Contains the following stabiliser(s):2-methyl-2-butene(0,002 %)

10.3 Possibility of hazardous reactions

Hazardous reactions : Risk of explosion with
Alkali metals
nitrogen oxides
nitrogen dioxide
Potassium
sodium azide
perchloric acid
Nitric acid
aluminium chloride
Amines
Oxygen
(as liquefied gas)
powdered aluminium
sodium
aromatic hydrocarbons
with
powdered aluminium
Exothermic reaction with:
Alkaline earth metals
Powdered metals
amides
alcoholates
nonmetallic oxides
potassium tert-butanolate
sodium amide
Lithium

10.4 Conditions to avoid

Conditions to avoid : Warming

10.5 Incompatible materials

No data available

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 - male and female - > 2.000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapour

Remarks: (ECHA)

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations - 4 h

(OECD Test Guideline 404)

Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

Remarks: (ECHA)

Remarks: Risk of corneal clouding.

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: positive

Test Type: In vivo micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Gavage

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - 104 Weeks - No observed adverse effect level - 6 mg/kg

Repeated dose toxicity - Rat - male and female - Inhalation - 104 Weeks

RTECS: PA8050000

Dizziness, Nausea, Vomiting, narcosis, Cough, irritant effects, Unconsciousness, Shortness of breath, respiratory paralysis, somnolence, depressed respiration, CNS disorders, inebriation

Risk of corneal clouding.

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.

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.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

After absorption of large quantities:

CNS disorders

Drowsiness

Dizziness

drop in blood pressure

Cardiac irregularities

depressed respiration

inebriation

Unconsciousness

Narcosis

Swallowing may result in damage to the following:

Liver
Kidney

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Section 12: Ecological information

12.1 Toxicity

Components:

Dichloromethane:

Toxicity to fish	LC50 (Pimephales promelas (fathead minnow)): 193,00 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Daphnia magna (Water flea)): 27 mg/l End point: mortality Exposure time: 48 h Test Type: static test Method: US-EPA
Toxicity to microorganisms	: EC50 (activated sludge): 2.590 mg/l Exposure time: 40 min Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : LC50: 471 mg/l
End point: mortality
Exposure time: 8 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

12.2 Persistence and degradability

Components:

Dichloromethane:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 5 mg/l
Result: Readily biodegradable.
Biodegradation: 68 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

12.3 Bioaccumulated potential

Components:

Dichloromethane:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 6 Weeks
Concentration: 250 µg/l
Bioconcentration factor (BCF): 2 - 5.4
Method: OECD Test Guideline 305
GLP: yes

Species: Cyprinus carpio (Carp)

	Exposure time: 6 Weeks
	Concentration: 25 µg/l
	Bioconcentration factor (BCF): 6 - 40
	Method: OECD Test Guideline 305
	GLP: yes
Partition coefficient: n-octanol/water	: log Pow: 1.25 (20 °C)
	pH: 7
	Method: (experimental)
	Remarks: Bioaccumulation is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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.

Components:

Dichloromethane:

Assessment	: Not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).
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Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Endocrine disrupting properties

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Components:

Dichloromethane:

Ozone-Depletion Potential : The figures relating to ozone-depleting potential are estimates based on existing knowledge and will be reviewed and revised periodically in the light of decisions taken by the Parties.
Regulation: Regulation (EU) No 2024/590 on substances that deplete the ozone layer (Update: 2024-02-20)
Group: Annex II Ozone-Depleting Substances
Referred To In Article 2, Point (A), Not Controlled Under The Protocol

Regulation (EU) No 2024/590 on substances that deplete the ozone layer

Components:

Dichloromethane:

100-year global warming potential: 11,2
Further information: The figures relating to ozone-depleting potential are estimates based on existing knowledge and will be reviewed and revised periodically in the light of decisions taken by the Parties., Annex II Ozone-Depleting Substances Referred To In Article 2, Point (A), Not Controlled Under The Protocol

Section 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Section 14: Transportation information

14.1 UN Number or ID number

ADR	UN 1593
IMDG	UN 1593
IATA	UN 1593

14.2 UN proper shipping name

ADR	DICHLOROMETHANE
IMDG	DICHLOROMETHANE
IATA	DICHLOROMETHANE

14.3 Transport hazard class(es)

ADR	6.1
IMDG	6.1
IATA	6.1

14.4 Packaging group

ADR

Packing group	III
Classification Code	T1
Hazard Identification Number	60
Labels	6.1
Tunnel restriction code	(E)

IMDG

Packing group	III
Labels	6.1
EmS Code	F-A, S-A

IATA(Cargo)

Packing instruction (cargo aircraft)	663
Packing instruction (LQ)	Y642
Packing group	III

Labels

Division 6.1 - Toxic substances

IATA_P (Passenger)

Packing instruction (passenger aircraft)

655

Packing instruction (LQ)

Y642

Packing group

III

Labels

Division 6.1 - Toxic substances

14.5 Environmental hazards

ADR

Environmentally
hazardous

no

IMDG

Marine pollutant

no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: CConditions of restriction for the following entries should be considered:

Number on list 3

Number on list 59:

Dichloromethane

Number on list 75: If you intend

to use this product as tattoo
ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	: Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	: Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	: Not applicable

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

Full text of H-statements

H336 May cause drowsiness or dizziness.

Further information

The information and recommendations in this SDS are to the best of our knowledge, information and belief accurate at the time of publication. Although utmost care is been taken in composition of this text, Highpuris LLC cannot be held responsible for any damage resulting from any possible error in this publication.