

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

1.1. Product identifier

Product form	: Substance
Trade name	: Dichloromethane a.r.
EC Index-No.	: 602-004-00-3
EC-No.	: 200-838-9
CAS-No.	: 75-09-2
REACH registration No	: 01-2119487001-48
Product code	: CL00.0404
Type of product	: Pure substance
Formula	: CH ₂ Cl ₂
Synonyms	: aethrene MM / DCM (=dichloromethane) / dichloromethane / F 30 (chlorocarbon) / freon 30 / hcc 30 / khmadon 30 / methane dichloride / methane, dichloro- / methylene bichloride / methylene chloride / methylene dichloride / narkotil / R30 / R30 (refrigerant) / solaesthin / soleana vda / solmethine

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Chem-Lab nv
Industriezone "De Arend" 2
Zedelgem - Belgium
T +32 50 288320
info@chem-lab.be - www.chem-lab.be

1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Carcinogenicity, Category 2 H351

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H351 - Suspected of causing cancer.

Precautionary statements (CLP) :

P281 - Use personal protective equipment as required.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dichloromethane a.r.	(CAS-No.) 75-09-2 (EC-No.) 200-838-9 (EC Index-No.) 602-004-00-3 (REACH-no) 01-2119487001-48	100	Carc. 2, H351

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: Dry/sore throat. Coughing. EXPOSURE TO HIGH CONCENTRATIONS: Headache. Nausea. Feeling of weakness. Dizziness. Coordination disorders. Impaired concentration. Change in the haemogramme/blood composition. ON CONTINUOUS EXPOSURE/CONTACT: Respiratory difficulties. Disturbances of consciousness.
Symptoms/effects after skin contact	: Tingling/irritation of the skin.
Symptoms/effects after eye contact	: Irritation of the eye tissue.
Symptoms/effects after ingestion	: AFTER INGESTION OF HIGH QUANTITIES: Nausea. Dry/sore throat. Gastrointestinal complaints.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Central nervous system depression. Mental confusion. Slurred speech. Visual disturbances. Drunkenness. Delusions. Impaired memory. Enlargement/affection of the liver. Change in the haemogramme/blood composition.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (not alcohol-resistant).
Unsuitable extinguishing media	: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Flammable in the presence of a high energy source. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD: Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD: Gas/vapour explosive within explosion limits if energy source high. INDIRECT EXPLOSION HAZARD: Heat may cause pressure rise in tanks/drums: explosion risk. Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: consider evacuation.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray.

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective goggles. Head/neck protection. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

Emergency procedures : Keep upwind. Mark the danger area. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Keep containers closed. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of reactivity hazard: consider evacuation.

6.1.2. For emergency responders

Protective equipment : Compressed air/oxygen apparatus.

6.2. Environmental precautions

Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Provide equipment/receptacles with earthing.

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use earthed equipment. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

Hygiene measures : Observe strict hygiene.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature : < 35 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. organic materials. water/moisture.

Storage area : Store in a cool area. Store in a dry area. Store in a dark area. Ventilation at floor level. Provide for a tub to collect spills. Provide the tank with earthing. Unauthorized persons are not admitted. Store only in a limited quantity. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: stainless steel. polyethylene. glass. MATERIAL TO AVOID: iron. aluminium. synthetic material. copper. PVC.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dichloromethane a.r. (75-09-2)		
EU	IOELV TWA (mg/m ³)	353 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	706 mg/m ³
EU	IOELV STEL (ppm)	200 ppm
Belgium	Limit value (mg/m ³)	177 mg/m ³
Belgium	Limit value (ppm)	50 ppm
France	VME (mg/m ³)	178 mg/m ³
France	VME (ppm)	50 ppm

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Dichloromethane a.r. (75-09-2)		
France	VLE (mg/m ³)	356 mg/m ³
France	VLE (ppm)	100 ppm
United Kingdom	WEL TWA (mg/m ³)	350 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	1060 mg/m ³
United Kingdom	WEL STEL (ppm)	300 ppm
USA - ACGIH	ACGIH TWA (ppm)	50 ppm

Dichloromethane a.r. (75-09-2)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	706 mg/m ³
Long-term - systemic effects, dermal	12 mg/kg bw/day
Long-term - systemic effects, inhalation	353 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	353 mg/m ³
Long-term - systemic effects, oral	0.06 mg/kg bw/day
Long-term - systemic effects, inhalation	88.3 mg/m ³
Long-term - systemic effects, dermal	5.82 mg/kg bw/day
PNEC (Water)	
PNEC aqua (freshwater)	0.31 mg/l
PNEC aqua (marine water)	0.031 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	2.57 mg/kg dwt
PNEC sediment (marine water)	0.26 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.33 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	26 mg/l

8.2. Exposure controls

Materials for protective clothing:
GIVE GOOD RESISTANCE: PVA. viton. fluor rubber. GIVE LESS RESISTANCE: neoprene. tetrafluoroethylene. GIVE POOR RESISTANCE: butyl rubber. natural rubber. nitrile rubber. PVC. styrene-butadiene rubber
Hand protection:
Gloves
Eye protection:
Safety glasses
Skin and body protection:
Head/neck protection. Protective clothing
Respiratory protection:
Full face mask with filter type AX at conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 84.94 g/mol
Colour	: Colourless.

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Odour	: Ether-like odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 27.5
Relative evaporation rate (ether=1)	: 1.8
Melting point	: -95 °C (1013 hPa)
Freezing point	: No data available
Boiling point	: 40 °C (1013 hPa)
Flash point	: No data available
Critical temperature	: 245 °C
Auto-ignition temperature	: 605 °C (1013 hPa)
Decomposition temperature	: > 120 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: 470 hPa (20 °C)
Vapour pressure at 50 °C	: 1445 hPa
Critical pressure	: 61000 hPa
Relative vapour density at 20 °C	: 2.9
Relative density	: 1.3 (20 °C)
Relative density of saturated gas/air mixture	: 1.9
Density	: 1325 kg/m ³
Solubility	: Moderately soluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in dimethylformamide. Water: 1.3 g/100ml (25 °C)
Log Pow	: 1.25 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Viscosity, kinematic	: 0.317 mm ² /s
Viscosity, dynamic	: 0.42 mPa.s (20 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 13 - 22 vol % 450 - 780 g/m ³
Lower explosive limit (LEL)	: 13 vol %
Upper explosive limit (UEL)	: 22 vol %

9.2. Other information

Specific conductivity	: 4300 pS/m
Saturation concentration	: 1535 g/m ³
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Highly volatile. May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

On heating under increased oxygen concentration: (increased) risk of fire/explosion. Reacts on exposure to water and heat with (some) metals.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Violent to explosive reaction with many compounds e.g. with (some) acids, with (some) metal powders and with (strong) oxidizers: (increased) risk of fire/explosion and formation of small quantities of phosgene. Decomposes slowly on exposure to water (moisture): release of toxic and corrosive gases/vapours (hydrogen chloride).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Acute toxicity (inhalation) : Not classified

Dichloromethane a.r. (75-09-2)

LD50 oral rat	> 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male/female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value, Dermal)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Dichloromethane a.r. (75-09-2)

Viscosity, kinematic	0.317 mm ² /s
Potential adverse human health effects and symptoms	: Odour threshold is well above the exposure limit. Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Moderately irritant to skin. Slightly harmful by inhalation. Obstructs oxygen absorption if inhaled. Moderately irritant for eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Included in the list of substances which may contribute to the greenhouse effect (IPCC). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Harmful to crustacea. Slightly harmful to fishes. Groundwater pollutant. Inhibition of activated sludge. Slightly harmful to algae. Toxic to bacteria.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Dichloromethane a.r. (75-09-2)

LC50 fish 1	193 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	168.2 mg/l (48 h, Daphnia magna)
EC50 96h algae (1)	> 660 mg/l (Selenastrum capricornutum, Growth rate)

12.2. Persistence and degradability

Dichloromethane a.r. (75-09-2)

Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
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12.3. Bioaccumulative potential

Dichloromethane a.r. (75-09-2)

BCF fish 1	2 - 40 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Semi-static system, Fresh water, Experimental value, GLP)
Log Pow	1.25 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Dichloromethane a.r. (75-09-2)

Surface tension	0.028 N/m (20 °C)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.5. Results of PBT and vPvB assessment

Dichloromethane a.r. (75-09-2)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods






Product/Packaging disposal recommendations : Do not discharge into surface water (Directive 2000/60/EC, Council Decision 2455/2001/EC). Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an incinerator for chlorinated waste materials with energy recovery.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

European List of Waste (LoW) code : 15 01 10* - packaging containing residues of or contaminated by dangerous substances
07 01 03* - organic halogenated solvents, washing liquids and mother liquors

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1593	1593	1593	1593	1593
14.2. UN proper shipping name				
Dichloromethane	Dichloromethane	Dichloromethane	Dichloromethane	Dichloromethane
Transport document description				
UN 1593 Dichloromethane, 6.1, III, (E)	UN 1593 Dichloromethane, 6.1, III	UN 1593 Dichloromethane, 6.1, III	UN 1593 Dichloromethane, 6.1, III	UN 1593 Dichloromethane, 6.1, III
14.3. Transport hazard class(es)				
6.1	6.1	6.1	6.1	6.1
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

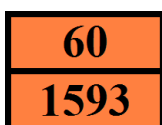
Overland transport

Transport regulations (ADR) : Subject to the provisions

Classification code (ADR) : T1

Hazard identification number (Kemler No.) : 60

Orange plates :



Tunnel restriction code (ADR) : E

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

EAC code : 2Z

Transport by sea

Transport regulations (IMDG) : Subject to the provisions
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A

Air transport

Transport regulations (IATA) : Subject to the provisions

Inland waterway transport

Classification code (ADN) : T1
Carriage permitted (ADN) : T

Rail transport

Transport regulations (RID) : Subject to the provisions
Classification code (RID) : T1

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
Dichloromethane a.r. is not on the REACH Candidate List
Dichloromethane a.r. is not on the REACH Annex XIV List

VOC content : 100 %
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV; ID No. 149)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)
TA Luft : 5.2.5 Organic Substances. Class I

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Carc. 2	Carcinogenicity, Category 2
H351	Suspected of causing cancer.

Dichloromethane a.r.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product