

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Dichloromethane

Creation date	11th May 2016	Version	7.0
Revision date	10th March 2023		

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

1.1. Product identifier

Dichloromethane
Substance / mixture
substance
Chemical name
dichloromethane
CAS number
75-09-2
Index number
602-004-00-3
EC (EINECS) number
200-838-9
Registration number
01-2119480404-41-xxxx
Other substance name
methylenchloride

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

Substance's intended use

Chemical production, analytical chemistry, laboratory synthesis, industrial applications.

Substance uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name	Ing. Petr Švec - PENTA s.r.o.
Address	Radiová 1122/1, Praha 10, 102 00
	Czech Republic
Identification number (CRN)	02096013
VAT Reg No	CZ02096013
Phone	+420 226 060 681
E-mail	info@pentachemicals.eu
Web address	www.pentachemicals.eu

Competent person responsible for the safety data sheet

Name	Ing. Petr Švec - PENTA s.r.o.
E-mail	info@pentachemicals.eu

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Skin Irrit. 2, H315
Eye Irrit. 2, H319
STOT SE 3, H335, H336
Carc. 2, H351
STOT RE 2, H373

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer.

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2.2. Label elements

Hazard pictogram



Signal word

Warning

Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P261	Avoid breathing vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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.

2.3. Other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 602-004-00-3 CAS: 75-09-2 EC: 200-838-9 Registration number: 01-2119480404-41- xxxx	substance main component dichloromethane	≥99	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335, H336 Carc. 2, H351 STOT RE 2, H373 (liver, blood, kidneys)	1, 2

Notes

- 1 A substance for which exposure limits are set.
- 2 The use of the substance is restricted by Annex XVII of REACH Regulation

Full text of all classifications and hazard statements is given in the section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

If swallowed

Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems.

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

If inhaled

May cause respiratory irritation. May cause drowsiness or dizziness.

If on skin

Causes skin irritation.

If in eyes

Causes serious eye irritation.

If swallowed

Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

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6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up. Keep container tightly closed.

Storage class

12 - Other non-combustible liquids

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

European Union

Commission Directive (EU) 2017/164

Substance name (component)	Type	Value	Note
dichloromethane (CAS: 75-09-2)	OEL 8 hours	353 mg/m ³	Skin
	OEL 8 hours	100 ppm	
	OEL 15 minutes	706 mg/m ³	
	OEL 15 minutes	200 ppm	

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles.

Skin protection

Hand protection: Protective gloves resistant to the product (fluorinated rubber). When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

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Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	data not available
Odour threshold	250 ppm
Melting point/freezing point	-95 °C
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	
bottom	13 %
upper	22 %
Flash point	data not available
Auto-ignition temperature	650 °C
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	0.31 mm ² /s at 40 °C
Viscosity	0.41 mPa.s
Solubility in water	data not available
Solubility in fats	data not available
Partition coefficient n-octanol/water (log value)	1.25
Vapour pressure	475 hPa at 20 °C
Density and/or relative density	
Density	1.325 g/cm ³ at 20 °C
Relative density	data not available
Relative vapour density	data not available
Particle characteristics	data not available

9.2. Other information

Evaporation rate	data not available
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SECTION 10: Stability and reactivity

10.1. Reactivity

The substance is non-flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

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10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

No toxicological data is available for the substance. Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time.

Acute toxicity

Based on available data the classification criteria are not met.

dichloromethane						
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD ₅₀	OECD 401	>2000 mg/kg		Rat	
Dermal	LD ₅₀	OECD 402	>2000 mg/kg		Rat	

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

No data available for the substance. Based on available data the classification criteria are not met.

Germ cell mutagenicity

No data available for the substance. Based on available data the classification criteria are not met.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available for the substance. Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Toxicity for specific target organ - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available for the substance. Based on available data the classification criteria are not met.

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11.2. Information on other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 12: Ecological information

12.1. Toxicity

No data available for the substance. Based on available data the classification criteria are not met.

12.2. Persistence and degradability

No data available for the substance.

12.3. Bioaccumulative potential

No data available for the substance.

12.4. Mobility in soil

No data available for the substance.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

UN 1593

14.2. UN proper shipping name

DICHLOROMETHANE

14.3. Transport hazard class(es)

6.1 Toxic substances

14.4. Packing group

III - substances presenting low danger

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

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Additional information

Hazard identification No.

60

UN number

1593

Classification code

T1

Safety signs

6.1



Air transport - ICAO/IATA

Packaging instructions passenger

655

Cargo packaging instructions

663

Marine transport - IMDG

EmS (emergency plan)

F-A, S-A

MFAG

340

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

dichloromethane

Restriction	Conditions of restriction
59	<p>1. Paint strippers containing dichloromethane in a concentration equal to or greater than 0,1 % by weight shall not be:</p> <p>(a) placed on the market for the first time for supply to the general public or to professionals after 6 December 2010;</p> <p>(b) placed on the market for supply to the general public or to professionals after 6 December 2011;</p> <p>(c) used by professionals after 6 June 2012.</p> <p>For the purposes of this entry:</p> <p>(i) "professional" means any natural or legal person, including workers and self-employed workers undertaking paint stripping in the course of their professional activity outside an industrial installation;</p> <p>(ii) "industrial installation" means a facility used for paint stripping activities.</p> <p>2. By way of derogation from paragraph 1, Member States may allow on their territories and for certain activities the use, by specifically trained professionals, of paint strippers containing di-chloromethane and may allow the placing on the market of such paint strippers for supply to those professionals.</p> <p>Member States making use of this derogation shall define appropriate provisions for the protection of the health and safety of those professionals using paint strippers containing dichloromethane and shall inform the Commission thereof.</p> <p>Those provisions shall include a requirement that a professional shall hold a certificate that is</p>

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Restriction	Conditions of restriction
	<p>accepted by the Member State in which that professional operates, or provide other documentary evidence to that effect, or be otherwise approved by that Member State, so as to demonstrate proper training and competence to safely use paint strippers containing dichloromethane.</p> <p>The Commission shall prepare a list of the Member States which have made use of the derogation in this paragraph and make it publicly available over the Internet.</p> <p>3. A professional benefiting from the derogation referred to in paragraph 2 shall operate only in Member States which have made use of that derogation. The training referred to in paragraph 2 shall cover as a minimum:</p> <ul style="list-style-type: none"> (a) awareness, evaluation and management of risks to health, including information on existing substitutes or processes, which under their conditions of use are less hazardous to the health and safety of workers; (b) use of adequate ventilation; (c) use of appropriate personal protective equipment that complies with Directive 89/686/EEC. <p>Employers and self-employed workers shall preferably replace dichloromethane with a chemical agent or process which, under its conditions of use, presents no risk, or a lower risk, to the health and safety of workers.</p> <p>Professional shall apply all relevant safety measures in practice, including the use of personal protective equipment.</p> <p>4. Without prejudice to other Community legislation on workers protection, paint strippers containing dichloromethane in concentrations equal to or greater than 0,1 % by weight may be used in industrial installations only if the following minimum conditions are met:</p> <ul style="list-style-type: none"> (a) effective ventilation in all processing areas, in particular for the wet processing and the drying of stripped articles: local exhaust ventilation at strip tanks supplemented by forced ventilation in those areas, so as to minimise exposure and to ensure compliance, where technically feasible, with relevant occupational exposure limits; (b) measures to minimise evaporation from strip tanks comprising: lids for covering strip tanks except during loading and unloading; suitable loading and unloading arrangements for strip tanks; and wash tanks with water or brine to remove excess solvent after unloading; (c) measures for the safe handling of dichloromethane in strip tanks comprising: pumps and pipework for transferring paint stripper to and from strip tanks; and suitable arrangements for safe cleaning of tanks and removal of sludge; (d) personal protective equipment that complies with Directive 89/686/EEC comprising: suitable protective gloves, safety goggles and protective clothing; and appropriate respiratory protective equipment where compliance with relevant occupational exposure limits cannot be otherwise achieved; (e) adequate information, instruction and training for operators in the use of such equipment. <p>5. Without prejudice to other Community provisions concerning the classification, labelling and packaging of substances and mixtures, by 6 December 2011 paint strippers containing dichloromethane in a concentration equal to or greater than 0,1 % by weight shall be visibly, legibly and indelibly marked as follows:</p> <p>"Restricted to industrial use and to professionals approved in certain EU Member States — verify where use is allowed."</p>

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H315	Causes skin irritation.
H319	Causes serious eye irritation.

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H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to the liver, the blood, the kidneys through prolonged or repeated exposure.

Guidelines for safe handling used in the safety data sheet

P201	Obtain special instructions before use.
P261	Avoid breathing vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
log K _{ow}	Octanol-water partition coefficient
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Carc.	Carcinogenicity

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Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.