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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 02 Jun 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Dichloromethane

1.1. Catalog No.:

687507

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Carcinogenicity (Category 2), H351
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

2.2. Label elements

2.2.1. Pictogram

2.2.2.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram Signal word Warning

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Hazard statement(s)
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
Precautionary statement(s)
P201 Obtain special instructions before use.
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.
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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Synonyms : Methylene chloride
DCM
Formula : CH2Cl2
Molecular weight : 84,93 g/mol
CAS-No. : 75-09-2
EC-No. : 200-838-9
Index-No. : 602-004-00-3
Component Classification Concentration
Methylene chloride
Skin Irrit. 2; Eye Irrit. 2;
Carc. 2; STOT SE 3; H315,
H319, H351, H336
Concentration limits:
20 %: STOT SE 3, H336;
<= 100 %

3.1.1. Formula

CH2Cl2

3.1.2. Molecular Weight (g/mol)

84.93

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3.1.3. CAS-No.

75-09-2

4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. 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 labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
For personal protection see section 8.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
6.4 Reference to other sections
For disposal see section 13

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.
Heat sensitive. Handle and store under inert gas.
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance Form: liquid
Colour: colourless
b) Odour ether-like
c) Odour Threshold No data available
d) pH No data available
e) Melting point/freezing point
Melting point/range: -97 °C
f) Initial boiling point and boiling range
39,8 - 40 °C
g) Flash point - closed cupdoes not flash
h) Evaporation rate 0,71
i) Flammability (solid, gas)
No data available
j) Upper/lower explosive limits
Upper explosion limit: 22 %(V) flammability or
Lower explosion limit: 13 %(V)
k) Vapour pressure 584 hPa at 25 °C
l) Vapour density 2,93
m) Relative density 1,325 g/mL at 25 °C
n) Water solubility 13,2 g/l at 25 °C
o) Partition coefficient: n-octanol/water
log Pow: 1,25 at 20 °C - Bioaccumulation is not expected.
p) Auto-ignition temperature
605 °C
at 1.013 hPa - DIN 51794
q) Decomposition temperature
No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
Relative vapour density
2,93

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10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
Contains the following stabiliser(s):
2-Methyl-2-butene (>0,005 - <0,015 %)
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
various plastics, Rubber, Light metals, Metals, Mild steel, Strong oxidizing agents
10.6 Hazardous decomposition products
Other decomposition products - No data available
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
In the event of fire: see section 5

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
Remarks: (ECHA)
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)
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)
Risk of corneal clouding.
Respiratory or skin sensitisation
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)
Germ cell mutagenicity
Mutagenicity (mammal cell test): chromosome aberration.
Chinese hamster ovary cells
Result: positive
Ames test
Salmonella typhimurium
Result: positive
OECD Test Guideline 474
Mouse - male and female - Bone marrow
Result: negative Carcinogenicity
Limited evidence of carcinogenicity in animal studies
Suspected human carcinogens
IARC: 2A - Group 2A: Probably carcinogenic to humans (Methylene chloride)
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
Inhalation - May cause drowsiness or dizziness. - Central nervous system
Acute oral toxicity - Nausea, Vomiting, Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.
Acute inhalation toxicity - Possible damages:, mucosal irritations
Specific target organ toxicity - repeated exposure
No data available Aspiration hazard
No data available
Additional Information
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

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 193,00 mg/l - 96 h
Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates
static test LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h
(US-EPA)
Toxicity to bacteria static test EC50 - activated sludge - 2.590 mg/l - 40 min
(OECD Test Guideline 209)
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 68 % - Readily biodegradable.
(OECD Test Guideline 301D)
12.3 Bioaccumulative potential
Bioaccumulation Cyprinus carpio (Carp) - 6 Weeks
- 250 ug/l(Methylene chloride)
Bioconcentration factor (BCF): 2 - 5,4
(OECD Test Guideline 305)
Cyprinus carpio (Carp) - 6 Weeks
- 25 ug/l(Methylene chloride)
Bioconcentration factor (BCF): 6 - 40
(OECD Test Guideline 305) 12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB 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.
12.6 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
Contaminated packaging
Dispose of as unused product.

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14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 1593 IMDG: 1593 IATA: 1593
14.2 UN proper shipping name
ADR/RID: DICHLOROMETHANE
IMDG: DICHLOROMETHANE
IATA: Dichloromethane
14.3 Transport hazard class(es)
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1
14.4 Packaging group
ADR/RID: III IMDG: III IATA: III
14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user
No data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Authorisations and/or restrictions on use
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
: Methylene chloride
15.2 Chemical safety assessment
A Chemical Safety Assessment has been carried out for this substance

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!