



SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 08/07/2014

Version 1. 1

SECTION 1. Identification

Product identifier

| | |
|----------------|--|
| Product number | DX0837 |
| Product name | Dichloromethane HR-GC Grade For High Resolution Gas Chromatography OmniSolv® |
| CAS-No. | 75-09-2 |

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

| | |
|-----------------|----------------------|
| Identified uses | Reagent for analysis |
|-----------------|----------------------|

Details of the supplier of the safety data sheet

| | |
|---------|--|
| Company | EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) |
|---------|--|

| | |
|---------------------|--|
| Emergency telephone | 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week |
|---------------------|--|

SECTION 2. Hazards identification

GHS Classification

Acute toxicity, Category 4, Oral, H302

Carcinogenicity, Category 2, H351

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word

Warning

Hazard Statements

H302 Harmful if swallowed.

H351 Suspected of causing cancer.

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Precautionary Statements

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

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS and may deviate from the GHS information.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

| | |
|------------|--|
| Formula | CH ₂ Cl ₂ (Hill) |
| Molar mass | 84.93 g/mol |

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

dichlormethane (>= 90 % - <= 100 %)

75-09-2

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air. Call in physician.

Skin contact

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

Eye contact

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

Ingestion

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Call a physician immediately. Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, respiratory paralysis, depressed respiration, Drowsiness, Dizziness, Unconsciousness, narcosis, inebriation, Nausea, Vomiting, CNS disorders
Risk of corneal clouding.

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

Indication of any immediate medical attention and special treatment needed

No information available.

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SECTION 5. Fire-fighting measures

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.

Special hazards arising from the substance or mixture

Not combustible.

Vapors are heavier than air and may spread along floors.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

Hydrogen chloride gas, Phosgene

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/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and 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.

SECTION 7. Handling and storage

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

Conditions for safe storage, including any incompatibilities

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Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Protected from light.

Store at room temperature.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

| Basis | Value | Threshold limits | Remarks |
|-------|-------|------------------|---------|
|-------|-------|------------------|---------|

| | | | |
|------------------------|------------------------------|--------|--|
| <i>dichloromethane</i> | 75-09-2 | | |
| ACGIH | Time Weighted Average (TWA): | 50 ppm | |

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Other protective equipment:

protective clothing

Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

| | |
|----------------|------------------------------|
| Physical state | liquid |
| Color | colorless |
| Odor | sweet |
| Odor Threshold | 24.9 - 611.7 ppm |
| pH | at 68 °F (20 °C) neutral |

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| | |
|--|--|
| Melting point | -95 °C |
| Boiling point/boiling range | 104 °F (40 °C) at 1,013 hPa |
| Flash point | does not flash |
| Evaporation rate | 1.9 |
| Flammability (solid, gas) | not applicable |
| Lower explosion limit | 13 %(V) |
| Upper explosion limit | 22 %(V) |
| Vapor pressure | 475 hPa at 68 °F (20 °C) |
| Relative vapor density | 2.93 |
| Density | 1.33 g/cm ³ at 68 °F (20 °C) |
| Relative density | No information available. |
| Water solubility | 20 g/l at 68 °F (20 °C) |
| Partition coefficient: n-octanol/water | log Pow: 1.25 (experimental) (Lit.) Bioaccumulation is not expected. |
| Autoignition temperature | No information available. |
| Decomposition temperature | > 248 °F (> 120 °C) |
| Viscosity, dynamic | 0.43 mPa.s at 68 °F (20 °C) |
| Explosive properties | Not classified as explosive. |
| Oxidizing properties | none |
| Ignition temperature | 1121 °F (605 °C) Method: DIN 51794 |

SECTION 10. Stability and reactivity

Reactivity

See below

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Chemical stability

Sensitivity to light

Stabilizer

2-methyl-2-butene

Pent-2-ene

Possibility of hazardous reactions

Risk of explosion with:

Alkali metals, nitrogen oxides, nitrogen dioxide, Potassium, sodium azide, perchloric acid, Nitric acid, aluminum chloride, Amines, Oxygen, (as liquefied gas), powdered aluminum, sodium aromatic hydrocarbons, with powdered aluminum

Exothermic reaction with:

Alkaline earth metals, Powdered metals, amides, alcoholates, nonmetallic oxides, potassium tert-butanolate, sodium amide

Conditions to avoid

no information available

Incompatible materials

rubber, various plastics, Light metals, Metals, Mild steel

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Target Organs

Eyes

Skin

cardiovascular system

Central nervous system

Acute oral toxicity

LD50 rat: 1,600 mg/kg (RTECS)

LDLO human: 357 mg/kg (RTECS)

Symptoms: Nausea, Vomiting, Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis.

absorption

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OmniSolv®

Acute inhalation toxicity

LC50 rat: 88 mg/l; 30 min (IUCLID)

Symptoms: mucosal irritations

Acute dermal toxicity

LD50 rat: > 2,000 mg/kg

OECD Test Guideline 402

Skin irritation

rabbit

Result: Irritations

(IUCLID)

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

Eye irritation

rabbit

Result: slight irritation

(IUCLID)

Risk of corneal clouding.

Sensitization

Patch test:

Result: negative

(IUCLID)

Genotoxicity in vitro

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

(National Toxicology Program)

Ames test

Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 471

CMR effects

Carcinogenicity:

Suspected of causing cancer.

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

Group 2B: Possibly carcinogenic to humans

dichlormethane

75-09-2

OSHA

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| | | |
|-------|---|---------|
| NTP | dichlormethane | 75-09-2 |
| | Anticipated carcinogen. | |
| ACGIH | dichlormethane | 75-09-2 |
| | Confirmed animal carcinogen with unknown relevance to humans. | |
| | dichlormethane | 75-09-2 |

Further information

Swallowing may result in damage to the following:

Liver, Kidney

Systemic effects:

After absorption of large quantities:

CNS disorders, Drowsiness, Dizziness, drop in blood pressure, Cardiac irregularities, depressed respiration, inebriation, Unconsciousness, narcosis, respiratory paralysis

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

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 Pimephales promelas (fathead minnow): 193 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC0 Protozoa: > 16,000 mg/l (Lit.)

EC50 Daphnia magna (Water flea): 1,682 mg/l; 48 h

DIN 38412

Toxicity to algae

IC50 Pseudokirchneriella subcapitata (green algae): > 660 mg/l; 96 h (IUCLID)

Toxicity to bacteria

EC50 Photobacterium phosphoreum: 2.88 mg/l; 15 min (IUCLID)

Persistence and degradability

Biodegradability

5 - 26 %; 28 d

OECD Test Guideline 301C

After adaption biodegradable.

Not readily biodegradable.

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 1.25

(experimental)

(Lit.) Bioaccumulation is not expected.

Mobility in soil

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Distribution among environmental compartments

Adsorption/Soil

log K_{oc}: 1.00

(experimental)

Mobile in soils (Lit.)

Other adverse effects

Henry constant

329 Pa·m³/mol

Method: (experimental)

(Lit.) Distribution preferentially in air.

Additional ecological information

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

| | |
|---------------------------|-----------------|
| UN number | UN 1593 |
| Proper shipping name | DICHLOROMETHANE |
| Class | 6.1 |
| Packing group | III |
| Environmentally hazardous | -- |

Air transport (IATA)

| | |
|------------------------------|-----------------|
| UN number | UN 1593 |
| Proper shipping name | DICHLOROMETHANE |
| Class | 6.1 |
| Packing group | III |
| Environmentally hazardous | -- |
| Special precautions for user | no |

Sea transport (IMDG)

| | |
|------------------------------|-----------------|
| UN number | UN 1593 |
| Proper shipping name | DICHLOROMETHANE |
| Class | 6.1 |
| Packing group | III |
| Environmentally hazardous | -- |
| Special precautions for user | yes |

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EmS

F-A S-A

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Harmful if swallowed.

Carcinogen

Target organ effects

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Acute Health Hazard

Chronic Health Hazard

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients

dichlormethane

75-09-2

99.99 %

SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Ingredients

dichlormethane

Pennsylvania Right To Know

Ingredients

dichlormethane

New Jersey Right To Know

Ingredients

dichlormethane

California Prop 65 Components

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WARNING: this product contains a chemical known in the State of California to cause cancer.

Ingredients

dichloromethane

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

| | |
|------|------------------------------|
| H302 | Harmful if swallowed. |
| H351 | Suspected of causing cancer. |

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 08/07/2014

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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