

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 02.09.2019

Version 1.9

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

| | |
|------------------------------|--|
| Catalogue No. | 106054 |
| Product name | Dichloromethane for gas chromatography ECD and FID SupraSolv® |
| REACH Registration Number | A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline. |
| CAS-No. | 75-09-2 |

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

| | |
|-----------------|--|
| Identified uses | Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com). |
|-----------------|--|

1.3 Details of the supplier of the safety data sheet

| | |
|-------------------------|--|
| Company | Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0 |
| Responsible Department | EHS Manager * +61 (3) 8727 6300 * Monday through Friday, 8:00am to 5:00pm (EST) |
| Regional representation | Merck Pty. Limited ABN 80 001 239 818 Ground Floor, Building 1 885 Mountain Highway Bayswater VIC 3153 Australia www.merckmillipore.com |

| | |
|---|--|
| 1.4 Emergency telephone number | +61 (3) 8727 6300 After hours: CHEMCALL +64 4 917 9888 Poisons Information Centre: 13 1126 |
|---|--|

SECTION 2. Hazards identification**2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)**

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Catalogue No. 106054
Product name Dichloromethane for gas chromatography ECD and FID SupraSolv®

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

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word
Warning

Hazard statements

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

Precautionary statements

Response
P302 + P352 IF ON SKIN: Wash with plenty of soap and 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 pictograms



Signal word
Warning

Hazard statements

H351 Suspected of causing cancer.

Precautionary statements

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

Contains: Dichloromethane

CAS-No. 75-09-2

2.3 Other hazards

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None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

| | | |
|------------|---------------------------------|--|
| Formula | CH ₂ Cl ₂ | CH ₂ Cl ₂ (Hill) |
| EC-No. | 200-838-9 | |
| Molar mass | 84.93 g/mol | |

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

| CAS-No. | Registration number | Classification |
|---------|---------------------|----------------|
|---------|---------------------|----------------|

Dichloromethane (>= 50 % - <= 100 %)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

75-09-2 *)

Skin irritation, Category 2, H315
Eye irritation, Category 2, H319
Carcinogenicity, Category 2, H351
Specific target organ toxicity - single exposure, Category 3, H336

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Call in physician.

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

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

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

4.2 Most important symptoms and effects, both acute and delayed

Dizziness, inebriation, Nausea, Vomiting, CNS disorders, Unconsciousness, Cough, depressed respiration, Shortness of breath, respiratory paralysis
Risk of corneal clouding.

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

4.3 Indication of any immediate medical attention and special treatment needed

No information 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 hazards arising from the substance or mixture

Not combustible.

Vapours are heavier than air and may spread along floors.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen chloride gas, Phosgene

5.3 Advice for firefighters

Special protective equipment for firefighters

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

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.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 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. Chemisorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

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SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

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.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protected from light.

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

Recommended storage temperature see product label.

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

Dichloromethane (75-09-2)

AU OEL Skin designation: Can be absorbed through the skin.

Time Weighted Average (TWA): 50 ppm
174 mg/m³

8.2 Exposure controls

Engineering measures

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

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

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Hand protection

splash contact:

Glove material: Viton (R)
Glove thickness: 0.70 mm
Break through time: > 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: 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

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|-----------------------------|-----------------------|
| Form | liquid |
| Colour | colourless |
| Odour | sweet |
| Odour Threshold | 24.9 - 611.7 ppm |
| pH | at 20 °C neutral |
| Melting point | -95 °C |
| Boiling point/boiling range | 40 °C at 1,013 hPa |
| Flash point | does not flash |

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| | |
|--|--|
| Evaporation rate | 1.9 |
| Flammability (solid, gas) | Not applicable |
| Lower explosion limit | 13 %(V) |
| Upper explosion limit | 22 %(V) |
| Vapour pressure | 475 hPa at 20 °C |
| Relative vapour density | 2.93 |
| Density | 1.33 g/cm ³ at 20 °C |
| Relative density | No information available. |
| Water solubility | 20 g/l at 20 °C |
| Partition coefficient: n-octanol/water | log Pow: 1.25 (experimental) (Lit.) Bioaccumulation is not expected. |
| Auto-ignition temperature | No information available. |
| Decomposition temperature | > 120 °C Distillable in an undecomposed state at normal pressure. |
| Viscosity, dynamic | 0.43 mPa.s at 20 °C |
| Explosive properties | Not classified as explosive. |
| Oxidizing properties | none |

9.2 Other data

Ignition temperature 605 °C
DIN 51794

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

Sensitivity to light

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Product name Dichloromethane for gas chromatography ECD and FID SupraSolv®

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

Stabilizer
2-methyl-2-butene

10.3 Possibility of 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

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: > 2,000 mg/kg

OECD Test Guideline 401

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

Acute inhalation toxicity

LC50 Rat: 60.14 mg/l/17250 ppm; 4 h ; vapour

(Lit.)

Symptoms: Possible damages:, mucosal irritations

Acute dermal toxicity

This information is not available.

Skin irritation

Rabbit

Result: Irritations

OECD Test Guideline 404

Causes skin irritation.

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

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Product name Dichloromethane for gas chromatography ECD and FID SupraSolv®

Eye irritation

Rabbit

Result: Eye irritation

(ECHA)

Causes serious eye irritation.

Risk of corneal clouding.

Sensitisation

Local lymph node assay (LLNA) Mouse

Result: negative

Method: OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vivo

In vivo micronucleus test

Mouse

male and female

Oral

Bone marrow

Result: negative

Method: OECD Test Guideline 474

Genotoxicity in vitro

Mutagenicity (mammal cell test): chromosome aberration.

Result: positive

Method: OECD Test Guideline 473

Ames test

Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 471

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

CMR effects

Carcinogenicity:

Suspected of causing cancer.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Exposure routes: Inhalation

Target Organs: Central nervous system

Specific target organ toxicity - repeated exposure

This information is not available.

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Aspiration hazard

This information is not available.

11.2 Further information

Systemic effects:

After absorption of large quantities:

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

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

Toxicity to fish

flow-through test LC50 Pimephales promelas (fathead minnow): 193 mg/l; 96 h

Analytical monitoring: yes

US-EPA

Toxicity to daphnia and other aquatic invertebrates

static test EC50 Daphnia magna (Water flea): 27 mg/l; 48 h

US-EPA

Toxicity to algae

static test EbC50 Pseudokirchneriella subcapitata (green algae): > 662 mg/l; 96 h

OECD Test Guideline 201

Toxicity to bacteria

static test EC50 activated sludge: 2,590 mg/l; 40 min

Analytical monitoring: yes

OECD Test Guideline 209

Toxicity to fish (Chronic toxicity)

flow-through test NOEC Pimephales promelas (fathead minnow): 83 mg/l; 28 d

Analytical monitoring: yes

(ECHA)

12.2 Persistence and degradability

Biodegradability

68 %; 28 d; aerobic

OECD Test Guideline 301D

Readily biodegradable

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 1.25

(experimental)

(Lit.) Bioaccumulation is not expected.

12.4 Mobility in soil

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Distribution among environmental compartments

Adsorption/Soil

log K_{oc}: 1.00

(experimental)

Mobile in soils (Lit.)

12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects

Henry constant

329 Pa*m³/mol

Method: (experimental)

(Lit.) Distribution preferentially in air.

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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. Transport information

Land transport (ADR/RID)

| | |
|--|-----------------|
| 14.1 UN number | UN 1593 |
| 14.2 Proper shipping name | DICHLOROMETHANE |
| 14.3 Class | 6.1 |
| 14.4 Packing group | III |
| 14.5 Environmentally hazardous | -- |
| 14.6 Special precautions for user | yes |
| Tunnel restriction code | E |

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

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14.1 UN number UN 1593
14.2 Proper shipping name DICHLOROMETHANE
14.3 Class 6.1
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 1593
14.2 Proper shipping name DICHLOROMETHANE
14.3 Class 6.1
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-A S-A

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

Other regulations

Hazchem Code 2Z

SECTION 15. Regulatory information

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

National legislation

Storage class 6.1 D

Standard for the Uniform S5
Scheduling of Medicines
and Poisons - Poisons
Schedule Number:

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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Dichloromethane for gas chromatography ECD and FID SupraSolv®

SECTION 16. Other information

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

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

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word
Warning

Hazard statements

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

Precautionary statements

Response
P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

Contains: Dichloromethane

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.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the

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product ordered. For further information please contact mlsbranding@sial.com.