



# SAFETY DATA SHEET

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

Revision Date 02/02/2015

Version 1.2

## SECTION 1. Identification

### Product identifier

Product number	DX0838
Product name	Dichloromethane HPLC Grade
Synonyms	DCM
CAS-No.	75-09-2

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

Identified uses	Reagent for analysis
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### 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)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

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*  
H351 Suspected of causing cancer.

*Precautionary Statements*

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P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P281 Use personal protective equipment as required.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

## Other hazards

None known.

## SECTION 3. Composition/information on ingredients

Formula	CH <sub>2</sub> Cl <sub>2</sub>	CH <sub>2</sub> Cl <sub>2</sub> (Hill)
Synonyms	DCM	
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. Consult a physician.

#### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing. Consult a physician.

#### *Eye contact*

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

#### *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.

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### 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 empty into 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. Chemisorb®). Dispose of properly. Clean up affected area.

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### 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.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
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#### *dichloromethane 75-09-2*

ACGIH	Time Weighted Average (TWA):	50 ppm	
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### 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

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### 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.

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## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	sweet
Odor Threshold	24.9 - 611.7 ppm

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pH	at 68 °F (20 °C) neutral
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 <sup>3</sup> 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) DIN 51794

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### SECTION 10. Stability and reactivity

#### Reactivity

See below

#### Chemical stability

Sensitivity to light

#### *Stabilizer*

2-methyl-2-butene

#### 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.

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### SECTION 11. Toxicological information

#### Information on toxicological effects

##### *Likely route of exposure*

Inhalation, Eye contact, Skin contact

##### *Target Organs*

Eyes

Skin

cardiovascular system

Central nervous system

##### *Acute oral toxicity*

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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*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	
	dichlormethane 75-09-2

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NTP	Anticipated carcinogen.	
	dichlormethane	75-09-2
ACGIH	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.

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## 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

#### *Distribution among environmental compartments*

Adsorption/Soil

log Koc: 1.00

(experimental)

Mobile in soils (Lit.)



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## Other adverse effects

*Henry constant*

329 Pa\*m<sup>3</sup>/mol

Method: (experimental)

(Lit.) Distribution preferentially in air.

*Additional ecological information*

Discharge into the environment must be avoided.

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## 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.

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## 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
EmS	F-A S-A

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## SECTION 15. Regulatory information

United States of America

SARA 313

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

*Ingredients*

dichlormethane	75-09-2	99.998 %
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**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**

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

*Ingredients*

dichlormethane

**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.

KOREA: Not in compliance with the inventory

**SECTION 16. Other information**

**Training advice**

Provide adequate information, instruction and training for operators.

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## Labeling

*Hazard pictograms*



*Signal Word*  
Warning

*Hazard Statements*

H351 Suspected of causing cancer.

*Precautionary Statements*

Response

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

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

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](http://www.wikipedia.org).

Revision Date 02/02/2015

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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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