

# Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 05.01.2012

Printing date 02.07.2013

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

### 1.1 Product identifier

Trade name

**Dichloromethane**

Stock number:

L13089

CAS Number:

75-09-2

EC number:

200-838-9

Index number:

602-004-00-3

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

Identified use:

SU24 Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG  
A Johnson Matthey Company  
Zeppelinstr. 7b  
76185 Karlsruhe / Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300  
Email: tech@alfa.com  
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R40: Limited evidence of a carcinogenic effect.

Carc. Cat. 3

Information concerning particular hazards for human and environment:

Not applicable

Other hazards that do not result in classification

No information known.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

Precautionary statements

The substance is classified and labelled according to the CLP regulation.

GHS08

Warning

H351 Suspected of causing cancer.

P281 Use personal protective equipment as required.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

CAS# Designation:

75-09-2 Dichloromethane

Identification number(s):

200-838-9

EC number:

602-004-00-3

Index number:

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek medical treatment.

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

No further relevant information available.

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

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing agents

CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

### 5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

Phosgene gas

### 5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

### 6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach sewage system or water bodies.

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**6.3 Methods and material for containment and cleaning up:**

Do not allow to enter the ground/soil.

**Prevention of secondary hazards:  
6.4 Reference to other sections**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Dispose of contaminated material as waste according to item 13.  
 Ensure adequate ventilation.  
 No special measures required.  
 See Section 7 for information on safe handling  
 See section 8 for information on personal protection equipment.  
 See Section 13 for information on disposal.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Keep containers tightly sealed.  
 Store in cool, dry place in tightly closed containers.  
 Ensure good ventilation/exhaustion at the workplace.

**Information about protection against explosions and fires:**

No information known.

**7.2 Conditions for safe storage, including any incompatibilities**
**Storage Requirements to be met by storerooms and containers:  
 Information about storage in one common storage facility:**

Unsuitable material for container: aluminium.

Store away from oxidizing agents.  
 Store away from metals.  
 Water reacts violently with alkali metals.

**Further information about storage conditions:**

Keep container tightly sealed.  
 Store in cool, dry conditions in well sealed containers.  
 No further relevant information available.

**7.3 Specific end use(s)****SECTION 8: Exposure controls/personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**8.1 Control parameters****Components with critical values that require monitoring at the workplace:****75-09-2 Dichloromethane (100,0%)**

AGW (Germany)	260 mg/m³, 75 ppm 4(II);AGS
MAK (TRGS 900) (Germany)	350 mg/m³, 100 ppm DFG
PEL (USA)	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910,1052
REL (USA)	See Pocket Guide App. A
TLV (USA)	174 mg/m³, 50 ppm BEI

**Ingredients with biological limit values:****75-09-2 Dichloromethane (100,0%)**

BGW (Germany)	5% B b Co-Hb
	1 mg/l B b Dichlormethan
BEI (USA)	0,3 mg/L urine end of shift Dichloromethane (semi-quantitative)

**Additional information:** No data**8.2 Exposure controls****Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
 Keep away from foodstuffs, beverages and food.  
 Instantly remove any soiled and impregnated garments.  
 Wash hands during breaks and at the end of the work.  
 Do not inhale gases / fumes / aerosols.  
 Maintain an ergonomically appropriate working environment.  
 Use breathing protection with high concentrations.  
 Check protective gloves prior to each use for their proper condition.  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Breathing equipment:****Protection of hands:****Material of gloves****Penetration time of glove material****Eye protection:**

Impervious gloves  
 Not determined  
 Safety glasses  
 Face protection  
 Protective work clothing.

**Body protection:****SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Liquid
Colour:	Colourless
Smell:	Sweetish
Odour threshold:	Not determined.

**pH-value:** Not determined.(Contd. on page 3)  
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<b>Change in condition</b>	
Melting point/Melting range:	-95 °C
Boiling point/Boiling range:	39-40 °C
Sublimation temperature / start:	Not determined
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	605 °C
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Critical values for explosion:	
Lower:	13 Vol %
Upper:	22 Vol %
Steam pressure at 20 °C:	475 hPa
Density at 20 °C	1,325 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water at 20 °C:	20 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic at 22 °C:	0,43 mPas
kinematic:	Not determined.
<b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No information known.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used and stored according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	Reacts with various metals Water reacts violently with alkali metals.
<b>10.5 Incompatible materials:</b>	Metals Alkali metals Oxidizing agents
<b>10.6 Hazardous decomposition products:</b>	Carbon monoxide and carbon dioxide Hydrogen chloride (HCl) Phosgene

**SECTION 11: Toxicological information**

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

**LD/LC50 values that are relevant for classification:**

Oral	LD50	873 mg/kg (mouse) 1600 mg/kg (rat)
Inhalative	LC50/4H	76000 mg/m <sup>3</sup> /4H (rat)
	LC50/7H	14400 ppm/7H (mouse)

<b>Skin irritation or corrosion:</b>	May cause irritation
<b>Eye irritation or corrosion:</b>	May cause irritation
<b>Sensitization:</b>	No sensitizing effect known.
<b>Germ cell mutagenicity:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
<b>Carcinogenicity:</b>	Suspected of causing cancer. EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies. IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals. NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals. ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. Carcinogen as defined by OSHA. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product. The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.
<b>Reproductive toxicity:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.
<b>Specific target organ system toxicity - repeated exposure:</b>	No effects known.
<b>Specific target organ system toxicity - single exposure:</b>	No effects known.
<b>Aspiration hazard:</b>	No effects known.
<b>Additional toxicological information:</b>	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**SECTION 12: Ecological information**

<b>12.1 Toxicity</b>	
<b>Aquatic toxicity:</b>	No further relevant information available.
<b>12.2 Persistence and degradability</b>	No further relevant information available.
<b>12.3 Bioaccumulative potential</b>	No further relevant information available.
<b>12.4 Mobility in soil</b>	No further relevant information available.
<b>Additional ecological information:</b>	
<b>General notes:</b>	Do not allow product to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits. Water hazard class 2 (Assessment by list): hazardous for water. Danger to drinking water if even small quantities leak into soil. Avoid transfer into the environment.
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT:</b>	Not applicable.
<b>vPvB:</b>	Not applicable.
<b>12.6 Other adverse effects</b>	No further relevant information available.

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Hand over to disposers of hazardous waste.  
Must be specially treated under adherence to official regulations.  
Consult state, local or national regulations for proper disposal.

**Uncleaned packagings:****Recommendation:**

Disposal must be made according to official regulations.

**SECTION 14: Transport information****UN-Number****ADR, IMDG, IATA**

UN1593

**14.2 UN proper shipping name****ADR****IMDG, IATA**1593 DICHLOROMETHANE  
DICHLOROMETHANE**14.3 Transport hazard class(es)****ADR****Class****Label****IMDG, IATA**6.1 (T1) Toxic substances.  
6.1**Class****Label**6.1 Toxic substances.  
6.1**Packing group****ADR, IMDG, IATA**

III

**14.5 Environmental hazards:**

Not applicable.

**14.6 Special precautions for user****Kemler Number:****EMS Number:****Segregation groups**

Warning: Toxic substances.  
60  
F-A,S-A  
Liquid halogenated hydrocarbons

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC****Code**

Not applicable.

**Transport/Additional information:****ADR****Excepted quantities (EQ):****Limited quantities (LQ)****Transport category****Tunnel restriction code**E1  
5L  
2  
E**UN "Model Regulation":**

UN1593, DICHLOROMETHANE, 6.1, III

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical****Substances**

Substance is listed.

**Standard for the Uniform Scheduling of Drugs and Poisons****75-09-2 Dichloromethane**

S5

**National regulations****Information about limitation of use:**

Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.  
Not applicable

**Classification according to VbF:****Technical instructions (air):**

Class	Share in %
I	100,0

**Water hazard class:**

Water hazard class 2 (Assessment by list): hazardous for water.

**Other regulations, limitations and prohibitive****ELINCS (European List of Notified Chemical****Substances)**

Substance is not listed.

**Substances of very high concern (SVHC)****according to REACH, Article 57**

Substance is not listed.

**REACH - Pre-registered substances**

Substance is listed.

**15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:**

Health, Safety and Environmental Department.

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent