acc. to Regulation (EC) No. 1907/2006 (REACH)

Dichloromethane D2 99,5 Atom%D

article number: AE55 Version: 4.0 en

Replaces version of: 2022-09-20

Version: (3)



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

Product identifier 1.1

Identification of the substance Dichloromethane D2 99,5 Atom%D

Article number AE55

EC number 216-776-0 CAS number 1665-00-5

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for products which come into contact

with foodstuffs. Do not use for private purposes (household). Food, drink and animal feeding-

stuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de Website: www.carlroth.de

sheet:

sicherheit@carlroth.de e-mail (competent person):

1.4 **Emergency telephone number**

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

Classification of the substance or mixture 2.1

Classification acc. to GHS

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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.6	Carcinogenicity	2	Carc. 2	H351
3.8D	Specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336

For full text of abbreviations: see SECTION 16

2.2 Label elements

Labelling

Signal word Warning

Pictograms

GHS07, GHS08





Hazard statements

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

Precautionary statements

Precautionary statements - prevention

P261 Avoid breathing mist/vapours/spray P280 Wear protective gloves/eye protection

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

For professional users only

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of \geq 0,1%.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance Dichloromethane D2

Molecular formula CCl₂D₂

Molar mass 86,93 g/_{mol}

CAS No 1665-00-5

EC No 216-776-0

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Dizziness, Drowsiness, Narcosis, Unconsciousness, Corneal opacity, Vertigo

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings! water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO_2)

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water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

onable distance. Wear self-contained breathing apparatus.

6.1



Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 **Environmental precautions**

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections 6.4

patible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 **Precautions for safe handling**

Avoid exposure.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

Conditions for safe storage, including any incompatibilities

Observe hints for combined storage.

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In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen halides (HX)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reas-

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Methods and material for containment and cleaning up

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incom-

7.2

Keep container tightly closed.

Incompatible substances or mixtures

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Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
EU	methylene chloride (dichloromethane)	75-09-2	IOELV	100	353	200	706			Τ	2017/ 164/EU
GB	dichloromethane	75-09-2	WEL	100	353	200	706				EH40/ 2005

Notation

Ceiling-C

H STEL

Ceiling value is a limit value above which exposure should not occur

Absorbed through the skin
Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15minute period (unless otherwise specified)
Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) TWA

Biological limit values

Coun try	Name of agent	CAS No	Parameter	Nota tion	Identi- fier	Value	Material	Source
GB	dichloromethane	75-09-2	carbon monoxide		BMGV	30 ppm	end-tidal breath	EH40/ 2005

8.2 **Exposure controls**

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

Skin protection





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Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

type of material

FKM: fluoro-elastomer

material thickness

0,7mm

breakthrough times of the glove material

>120 minutes (permeation: level 4)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Respiratory protection necessary at: Aerosol or mist formation.

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state liquid

Colour colourless
Odour mild sweet

Melting point/freezing point -97 °C

Boiling point or initial boiling point and boiling 40 °C at 1.013 hPa

range

Flammability non-combustible

Lower and upper explosion limit 13 vol% (LEL) - 22 vol% (UEL)

Flash point not determined

Auto-ignition temperature 605 °C

Decomposition temperature >120 °C

pH (value) (20 °C) (neutral) Kinematic viscosity not determined

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Dynamic viscosity 0,45 mPa s at 25 °C

Solubility(ies)

Water solubility $20 \,^{9}/_{1}$ at $20 \,^{\circ}$ C

Partition coefficient

Partition coefficient n-octanol/water (log value): 1,25

Vapour pressure 476 hPa at 20 °C

Density and/or relative density

Density 1,36 g/_{cm³} at 20 °C

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard hazard classes acc. to GHS

classes: (physical hazards): not relevant

Other safety characteristics: There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

May cause decomposition by long-term light influence.

10.3 Possibility of hazardous reactions

Danger of explosion: Alkali metals, Aluminium, Amines, Nitric acid, Oxygen, strong oxidiser, Sodium, Potassium,

Exothermic reaction with: Alkaline earth metal, Metal powder

10.4 Conditions to avoid

Keep away from heat. Decompostion takes place from temperatures above: >120 °C. Direct light irradiation.

10.5 Incompatible materials

plastic and rubber, Light metals, Steel

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

vomiting, nausea, aspiration hazard

• If in eyes

corneal opacity, Causes serious eye irritation

• If inhaled

vertigo, dizziness, fatigue, narcosis

• If on skin

has degreasing effect on the skin, causes skin irritation

Other information

Other adverse effects: Liver and kidney damage, Circulatory collapse

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of \geq 0,1%.

11.3 Information on other hazards

There is no additional information.

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SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Theoretical Oxygen Demand: 0,184 ^{mg}/_{mg} Theoretical Carbon Dioxide: 0,5063 ^{mg}/_{mg}

Process of degradability

Process	Degradation rate	Time
biotic/abiotic	5 – 26 %	28 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	1,25
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12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of \geq 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

HP 4 irritant - skin irritation and eye damage

HP 7 carcinogenic

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13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

ADRRID UN 1593 IMDG-Code UN 1593 ICAO-TI UN 1593

14.2 UN proper shipping name

ADRRID DICHLOROMETHANE
IMDG-Code DICHLOROMETHANE
ICAO-TI Dichloromethane

14.3 Transport hazard class(es)

ADRRID 6.1 IMDG-Code 6.1 ICAO-TI 6.1

14.4 Packing group

ADRRID III
IMDG-Code III
ICAO-TI III

14.5 Environmental hazards non-environmentally hazardous acc. to the dan-

gerous goods regulations

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information

Proper shipping name DICHLOROMETHANE

Particulars in the transport document UN1593, DICHLOROMETHANE, 6.1, III, (E)

Classification code T1

Danger label(s) 6.1



Special provisions (SP) 516, 802(ADN)

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Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L
Transport category (TC) 2
Tunnel restriction code (TRC) E

Hazard identification No 60

Emergency Action Code 2Z

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional

information

Classification code T1

Danger label(s) 6.1

Special provisions (SP) 516, 802(ADN)

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L
Transport category (TC) 2
Hazard identification No 60

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name DICHLOROMETHANE

Particulars in the shipper's declaration UN1593, DICHLOROMETHANE, 6.1, III

Marine pollutant Danger label(s) 6.1

Special provisions (SP)

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L

EmS F-A, S-A

Stowage category A

Segregation group 10 - Liquid halogenated hydrocarbons

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name Dichloromethane

Particulars in the shipper's declaration UN1593, Dichloromethane, 6.1, III

Danger label(s) 6.1

Excepted quantities (EQ) E1

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Limited quantities (LQ)



SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

Seveso Directive

2012/	2012/18/EU (Seveso III)							
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes					
	not assigned							

2 L

Deco-Paint Directive

VOC content	100 %
VOC content	1.360 ^g / _l

Industrial Emissions Directive (IED)

VOC content	100 %
VOC content	1.360 ^g / _l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

List of pollutants (WFD) Name of substance Name acc. to inventory **CAS No** Listed in **Remarks** Dichloromethane D2 Organohalogen compounds and a) substances which may form such compounds in the aquatic environment Dichloromethane D2 Substances and preparations, or a) the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrinerelated functions in or via the aquatic environment

Legend

a) Indicative list of the main pollutants

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Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)					
Name of substance	Name acc. to inventory	CAS No	No		
Dichloromethane D2	Dichloromethane	75-09-2	59		
Dichloromethane D2	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		3		

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
EU	ECSI	substance is listed
KR	KECI	substance is listed
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed

Legend

ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
KECI Korea Existing Chemicals Inventory
NZIOC New Zealand Inventory of Chemicals
TCSI Taiwan Chemical Substance Inventory

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

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SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
15.1	VOC content: 100 % 1.360 ^g / _l	VOC content: 100 %	yes
15.1		VOC content: 1.360 ^g / _l	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Abbr. Descriptions of used abbreviations		
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU		
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)		
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)		
Ceiling-C	Ceiling value		
DGR	Dangerous Goods Regulations (see IATA/DGR)		
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)		
ED	Endocrine disruptor		
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)		
EINECS	European Inventory of Existing Commercial Chemical Substances		
ELINCS	European List of Notified Chemical Substances		
EmS	Emergency Schedule		
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)		
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations		
IATA	International Air Transport Association		
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)		
ICAO	International Civil Aviation Organization		
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air		
IMDG	International Maritime Dangerous Goods Code		
IMDG-Code	International Maritime Dangerous Goods Code		

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Abbr.	Descriptions of used abbreviations	
IOELV	Indicative occupational exposure limit value	
LEL	Lower explosion limit (LEL)	
NLP	No-Longer Polymer	
PBT	Persistent, Bioaccumulative and Toxic	
ppm	Parts per million	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals	
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)	
STEL	Short-term exposure limit	
TWA	Time-weighted average	
UEL	Upper explosion limit (UEL)	
VOC	Volatile Organic Compounds	
vPvB	Very Persistent and very Bioaccumulative	
WEL	Workplace exposure limit	

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)

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

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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