

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**
Version: **3.0 en**
Replaces version of: 2019-10-11
Version: (2)

date of compilation: 2016-09-29
Revision: 2022-09-20

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

1.1 Product identifier

Identification of the substance	Dichloromethane D2 99,5 Atom%D
Article number	AE55
EC number	216-776-0
CAS number	1665-00-5

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

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).

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

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

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

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

2.1 Classification of the substance or mixture

Classification acc. to GHS

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

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Dichloromethane D2
Molecular formula	CCl ₂ D ₂
Molar mass	86,93 g/mol
CAS No	1665-00-5
EC No	216-776-0

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

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 (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

None.

Hazardous combustion products

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 reasonable distance. Wear self-contained breathing apparatus.

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

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.

6.3 Methods and material for containment and cleaning up

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.

6.4 Reference to other sections

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

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

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.

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
EU	methylene chloride (dichloromethane)	75-09-2	IOELV	100	353	200	706			H	2017/164/EU
GB	dichloromethane	75-09-2	WEL	100	353	200	706				EH40/2005

Notation

Ceiling-C	Ceiling value is a limit value above which exposure should not occur
H	Absorbed through the skin
STEL	Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	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)

Biological limit values

Country	Name of agent	CAS No	Parameter	Notation	Identifier	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



• hand protection

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.

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

- **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 range	40 °C at 1.013 hPa
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)	not determined (neutral)
Kinematic viscosity	not determined
Dynamic viscosity	0,45 mPa s at 25 °C
<u>Solubility(ies)</u>	
Water solubility	20 g/l at 20 °C
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	1,25

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

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 classes: hazard classes acc. to GHS (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. Decomposition 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.

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

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

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

Not listed.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Biodegradation

Data are not available.

12.2 Process of degradability

Theoretical Carbon Dioxide: 0,5063 mg/mg

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

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
---------------------------	------

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

Not listed.

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.

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. Waste catalogue ordinance (Germany).

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.

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

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 dangerous 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

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - 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)
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	2

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

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

Limited quantities (LQ) 2 L

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: AE55

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

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

Deco-Paint Directive

VOC content	100 % 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 substances which may form such compounds in the aquatic environment		a)	
Dichloromethane D2	Substances and preparations, or 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 endocrine-related functions in or via the aquatic environment		a)	

Legend

A) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

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 classification 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
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed

Legend

ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
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.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation:
Restructuring: section 9, section 14

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1	The most important adverse physicochemical, human health and environmental effects: Narcotic effects.		yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Warning		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

Abbreviations and acronyms

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
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
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)
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

Safety data sheet Safety data sheet

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



Dichloromethane D2 99,5 Atom%D

article number: **AE55**

Abbr.	Descriptions of used abbreviations
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
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 (Regulations 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.