

EC Safety Data Sheet

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as per Regulation (EC) 1907/2006

Trade name : CHLOROBUTANOL x ½ H₂O , PH.EUR., USP / NF, BP, JP
 Manufacturer/supplier : athenstaedt GmbH & Co KG, D-35088 Battenberg (Eder)
 Revision date: 15.05.2025 Version 6.1 E

01. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier Chlorobutanol x 1/2 H₂O

Name of substance: Chlorobutanol Hemihydrate
REACH registration number 01-2120771350-61-0000
CAS No.: 6001-64-5
EC No.: 200-317-6

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

Uses of the substance or mixture: Industrial use
 Active substance

1.3 Details of the supplier of the safety data sheet

Company name: athenstaedt GmbH & Co KG
Street: Am Beerberg 1
Town/city: D-35088 Battenberg (Eder)
Telephone: +49 (0) 6452 92942 0
Fax: +49 (0) 6452 92942 15
E-mail (contact person): chemicals@athenstaedt.de
Website: <https://athenstaedt.de/>
Informing department: Ref. HSE

1.4 Emergency telephone number
24-hour emergency hotline of the poison control centre: +49 163 139 6613

02. Hazards identification

2.1 Classification of the substance or mixture Regulation (EC) No. 1272/2008:

Acute tox. 4; H 302
 See Section 16 for the wording of the hazard statements.

2.2 Label elements Regulation (EC) No. 1272/2008

Signal word:

Caution

Pictograms:



Hazard statements:

H 302

Hazardous to the health if swallowed

Safety warnings:

P 264

Wash hands thoroughly after use.

P 270

Do not eat, drink or smoke during use.

P 301 + 312

IF SWALLOWED: If you feel unwell

Call a POISON CENTRE or physician

P 330

Rinse mouth

P 501

Dispose of contents/container in a suitable recycling or disposal facility

2.3 Other hazards

Has an antibacterial and antifungal effect

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03. Composition/information on ingredients

3.1 Substances:

Hazardous ingredients

CAS No.:	Name of substance			Proportion
	EC No.	Index no.	REACH no.	
	Classification (Regulation (EC) No. 1272/2008)			
6001-64-5	Chlorobutanol			100%
	200-317-6		01-2120771350-61-0000	
	Acute tox. 4; H302			

Wording of H and EUH statements: see Section 16.

Specific concentration limits, M-factors and ATE

CAS No.:	EC No.	Name of substance	Proportion
	Specific concentration limits, M-factors and ATE		
6001-64-5	200-317-6	Chlorobutanol	100%
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 510 mg/kg		

04. First aid measures

4.1 Description of the first aid measures

General information:

Immediately remove all contaminated clothing and wash before wearing again.

After inhalation:

Provide fresh air. Medical treatment required.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes:

In case of contact with eyes, flush immediately with plenty of flowing water for sufficient time, holding eyelids apart, and consult an ophthalmologist.

If ingestion:

Never give anything by mouth to an unconscious person or a person with cramps. Rinse out mouth immediately and drink 1 glass of water. Do not induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Central nervous system depression.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

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05. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Extinguishing powder. Foam. Carbon dioxide concentration (CO₂).
 Coordinate the extinguishing medium to suit the surroundings.

Unsuitable extinguishing media:

Water jet.

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop: Hydrogen chloride (HCl).

5.3 Advice for firefighters

Wear protective respirator with independent air supply, chemical protection suit. Protective coveralls.

Additional information:

Use water spray to protect persons and cool down containers in the danger zone.
 Do not inhale explosion and combustion gases.
 Put down gases/vapours/mist with water spray.
 Collect contaminated extinguishing water separately. Do not allow to drain into sewers or bodies of water.

06. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

General information: Provide adequate ventilation. Prevent dust from forming. Do not inhale dust. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

6.2 Environmental protection

Do not allow to drain into sewers or bodies of water. Contain contaminated water and dispose of it.

6.3 Methods and material for containment and cleaning

For cleaning: Collect by mechanical means. Handle the collected material according to the Disposal section. Wear personal protective equipment.

6.4 Reference to other sections

Safe handling: see Section 7

Personal protective equipment: see Section 8

Disposal: see Section 13

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07. Handling and storage

7.1 Precautions for safe handling

Instructions for safe handling:

When handled in the open, use equipment with local exhaust ventilation. Prevent dust from forming. Do not inhale dust.

Instructions on fire and explosion protection:

Take the usual preventive fire protection measures. Keep away from heat.

Notes on general hygiene measures at the workplace:

Avoid contact with skin, eyes and clothing. Take off soiled or soaked clothes immediately. Create skin protection plan and follow it! Wash hands and face thoroughly before breaks and at the end of work, shower if necessary. Do not eat, drink, smoke or sniff when using. Store work clothes separately.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:

Keep containers tightly closed. Provide for sufficient ventilation and punctiform suction at critical points.

Instructions on combined storage:

Keep away from food, beverages and animal feed.

Additional information on storage requirements:

Store the container in a cool, well-ventilated location. Protect from humidity.

Storage class as per TRGS 510: 11

(Combustible solids that cannot be assigned to any of the above storage classes).

7.3 Specific end use(s)

Consult supplier before use for any special application.

08. Exposure controls/personal protection

8.1 Control parameters

Additional information on limit values:

No national limit values defined to date.

8.2 Environmental exposure controls



Appropriate engineering controls:

When handled in the open, use equipment with local exhaust ventilation. Do not inhale dust. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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Individual protective measures, such as personal protective equipment

Eye/face protection:

Hand protection:

Safety glasses with side-shields

Wear certified safety gloves:

Suitable material: NBR (nitrile rubber) (0.4 mm).
 Only chemical protective gloves with a CE mark including a four-digit test number may be worn when handling chemical agents. Chemical protective gloves are to be selected in their design depending on the hazardous substance concentration and quantity specific to the workplace. It is recommended to check the chemical resistance of the above mentioned protective gloves for specific applications with the glove manufacturer.

Use of protective clothing.

Body protection:

Respiratory protection:

Wear respiratory protection in case of insufficient ventilation.

Filter respirator (full face mask or mouthpiece assembly) with filter: ABEK & FFP2

09. Physical and chemical properties

9.1 Information on the basic physical and chemical properties

State of aggregation:

crystalline

Colour:

Colourless to white

Odour:

Camphorous odour

Changes of state

Melting point/freezing point:

76 - 81 °C

Boiling point or initial boiling point and boiling range:

173 - 175 °C 1013 mbar

Flashpoint:

> 110 °C

Flammability

Solid/liquid:

not determined

Gas:

not applicable

Explosion hazards:

The product does not pose a risk of explosion.

Lower explosion limit:

not determined

Upper explosion limit:

not determined

Ignition temperature:

not determined

Decomposition temperature:

not determined

pH value (at 20 °C):

4.5 - 6 (7.7 g/l)

Water solubility (at 20 °C):

7.7 g/l

Solubility in other solvents:

Ethanol, chloroform, ether, glycerol (85%):

Vapour pressure:

Not determined

Density:

Not determined

Bulk density:

550 kg/m³

Relative vapour density:

Not determined

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9.2 Additional information

Information on physical hazard classes

Oxidising properties:

The product is not a fire accelerant.

Other safety parameters

Solids content:

100.00%

Evaporation rate:

Not determined

Additional information:

hygroscopic.

010. Stability and reactivity

10.1 Reactivity:

No hazardous reactions will occur if handled and stored as intended.

10.2 Chemical stability:

The product is stable when stored at normal ambient temperatures.

10.3 Possibility of hazardous reactions:

There are no known hazardous reactions.

10.4 Conditions to avoid:

Keep away from: Incompatible materials.

No hazardous reactions will occur if handled and stored as intended.

10.5 Incompatible materials:

Oxidising agents. Acids. Alkalis (lyes).

10.6 Hazardous decomposition products:

Hydrogen chloride (HCl)

011. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity:

Harmful to the health if swallowed.

CAS No.:	Description				
	Exposure route	Dose	Species	Source	Method
6001-64-5	Chlorobutanol				
	oral	LD50 510 mg/kg	Rat	GESTIS Substance Database	
	dermal	LD50 > 2000 mg/kg	Rabbit	Third-party safety data sheets	

Irritant and corrosive effects:

The criteria for classification are not met based on available data.

Sensitisation effects:

The criteria for classification are not met based on available data.

Carcinogenicity, mutagenicity and toxicity for reproduction:

The criteria for classification are not met based on available data.

Specific target organ toxicity upon single exposure:

The criteria for classification are not met based on available data.

Specific target organ toxicity upon repeated exposure:

The criteria for classification are not met based on available data.

Aspiration hazard:

The criteria for classification are not met based on available data.

11.2 Information on other hazards

Endocrine-disrupting properties:

There is no information available.

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012. Environmental information

12.1 Toxicity

The product is not eco-toxic.

CAS No.:	Description					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
6001-64-5	Chlorobutanol					
	Acute fish toxicity	LC50 135 mg/l			GESTIS Database	

12.2 Persistence and decomposition

The product was not tested.

12.3 Bioaccumulative potential

The product was not tested.

N-octanol-water partition coefficient

CAS No.:	Description	Log Pow
6001-64-5	Chlorobutanol	2.03

12.4 Mobility in soil

The product was not tested.

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of the REACH Regulation, Annex XIII.
The product was not tested.

12.6 Endocrine-disrupting properties

This substance has no endocrine-disrupting properties concerning non-target organisms.

12.7 Other adverse effects

There is no information available.

Other information

Do not allow to drain into sewers or bodies of water. Do not allow to enter the subsoil/soil.

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013. Disposal considerations

13.1 Waste treatment methods

Recommendations for disposal:

Do not allow to drain into sewers or bodies of water. Do not allow to enter the subsoil/soil. Dispose of according to official regulations. The assigning of waste code numbers/waste identifications must be carried out according to EAKV (European Waste Catalogue Order) in an industry and process-specific manner.

Disposal of uncleaned packings and recommended cleaning products:

Non-contaminated packaging that has been emptied completely can be recycled. Handle contaminated packaging in the same way as the substance itself.

014. Transport information

Overland transport ADR/RID

14.1 UN number or ID number:

Does not constitute hazardous goods as defined by these transport regulations.

14.2 UN proper shipping name:

Does not constitute hazardous goods as defined by these transport regulations.

14.3 Transport hazard class(es):

Does not constitute hazardous goods as defined by these transport regulations.

14.4 Packing group:

Does not constitute hazardous goods as defined by these transport regulations.

Transport by inland waterway (ADN)

Other applicable information on transport by inland waterway:

Does not constitute hazardous goods as defined by these transport regulations.

Maritime transport (IMDG)

Other applicable information on maritime transport:

Does not constitute hazardous goods as defined by these transport regulations.

Air transport (ICAO-TI/IATA-DGR)

Other applicable information on air transport

Does not constitute hazardous goods as defined by these transport regulations.

14.5 Environmental hazards:

HAZARDOUS TO THE ENVIRONMENT: No

14.6 Special precautions for user:

No special precautions necessary.

14.7 Maritime bulk shipping as per IMO instruments:

Not applicable

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015. Legislation

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

EU regulations

Information on SEVESO III Directive
 2012/18/EU:

Not subject to the SEVESO III Directive

National regulations

Occupational restrictions:

Observe occupational restrictions for young people (§ 22 JArbSchG [Youth Employment Protection Act]). Observe occupational restrictions for expectant and nursing mothers (§§11 and 12 MuSchG [Maternity Protection Act]).

Water hazard class:

Status:

Identification number as per Catalogue of Water
 Endangering Substances [KWS]:

3 highly hazardous to water
 as per § 6 AwSV [Ordinance on Facilities for
 Handling Substances Hazardous to Water]
 855

15.2 Chemical safety assessment

A safety assessment has not been made for this substance.

016. Additional information

Changes version 6.1 E

Replaces Version 6 E dated 01.09.2022

1.4 Emergency telephone number
 24-hour emergency hotline of the poison control
 centre.

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Abbreviations and acronyms

CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 See ECHA for abbreviations and acronyms: Guidelines on information requirements and chemical safety assessment, Chapter R.20 (List of terms and abbreviations).

Wording of H and EUH statements (number and full text) H302 Harmful to the health if swallowed.

Additional information

Safety data sheet created by:
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