

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 05.08.2010

Revision: 05.08.2010

1 Identification of substance**Product details****Trade name****Choline hydroxide, 50% w/w Aqueous solution****Stock number:**

B24443

Manufacturer/Supplier:Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com**Informing department:**

Product safety department.

Emergency information:Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240**2 Hazards identification****Hazard designation:**

C Corrosive

**Information pertaining to particular dangers for man and environment
GHS label elements**

R 34 Causes burns.

**Danger**

H314 - Causes severe skin burns and eye damage.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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

Prevention:**Response:****Storage:****Disposal:****3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)**Choline hydroxide (CAS# 123-41-1): 100%
Water (CAS# 7732-18-5): 100%**4 First aid measures****General information
After inhalation**Instantly remove any clothing soiled by the product.
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.**After eye contact**

Seek immediate medical advice.

After swallowingRinse opened eye for several minutes under running water. Then consult doctor.
Seek immediate medical advice.**5 Fire fighting measures****Suitable extinguishing agents
Special hazards caused by the material, its products of combustion or flue gases:**CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.**Protective equipment:**Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Wear self-contained breathing apparatus.
Wear full protective suit.**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

Measures for cleaning/collecting:

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Additional information:**7 Handling and storage****Handling****Information 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:**

Keep ignition sources away - Do not smoke.

Storage**Requirements to be met by storerooms and containers:**

No special requirements.

Information about storage in one common storage facility:Aqueous solutions are incompatible with alkali and alkaline earth metals and many reactive organic and inorganic chemicals.
Do not store together with acids.
Store away from oxidizing agents.**Further information about storage conditions:**Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.**8 Exposure controls and 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.

Components with critical values that require monitoring at the workplace:

Not required.

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Additional information: No data

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.
Avoid contact with the eyes and skin.

Breathing equipment:

Use breathing protection with high concentrations.

Protection of hands:

Check protective gloves prior to each use for their proper condition.

Material of gloves

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.

Eye protection:

Safety glasses
Tightly sealed safety glasses.

Full face protection

Face protection

Body protection:

Protective work clothing.

9 Physical and chemical properties:**General Information**

Form: Liquid
Smell: Not determined

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

Flash point: Not determined

Ignition temperature: Not determined

Decomposition temperature: Not determined

Danger of explosion: Product is not explosive.

Critical values for explosion:
Lower: Not determined
Upper: Not determined

Steam pressure: Not determined

Density at 20°C: 1.073 g/cm³

Solubility in / Miscibility with
Water: Fully miscible

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Materials to be avoided:

Aqueous solutions are incompatible with alkali and alkaline earth metals and many reactive organic and inorganic chemicals.

Acids

Oxidizing agents

Reacts with alkaline metals

Reacts with alkaline earth metals

Dangerous reactions:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NO_x)

Dangerous products of decomposition:

11 Toxicological information

Acute toxicity:

Primary irritant effect:
on the skin:

Corrosive effect on skin and mucous membranes.

Irritant for skin and mucous membranes.

Strong corrosive effect.

Irritant effect.

No sensitizing effect known.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Sensitization:

Additional toxicological information:

12 Ecological information:

Additional ecological information:

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

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

13 Disposal considerations

Product:

Recommendation

Consult state, local or national regulations for proper disposal.

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

Recommended cleaning agent:

Water, if necessary with cleaning agent.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



ADR/RID-GGVS/E Class:

8 (C7) Corrosive substances.

Kemler Number:

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UN-Number: 3267
Packaging group: II
Label: 8
Designation of goods: 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (choline hydroxide/water)
Limited quantities (LQ): LQ22
Transport category: 2
Tunnel restriction code: E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 8
UN Number: 3267
Label: 8
Packaging group: II
Marine pollutant: No
Segregation groups: Alkalies
Correct technical name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (choline hydroxide/water)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 8
UN/ID Number: 3267
Label: 8
Packaging group: II
Correct technical name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (choline hydroxide/water)

UN "Model Regulation":
 UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., 8, II

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



C Corrosive

Risk phrases: 34 Causes burns.

Safety phrases: 20 When using do not eat or drink.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 60 This material and its container must be disposed of as hazardous waste.

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
 For use only by technically qualified individuals.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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.

Contact: Zachariah Holt

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 CAS: Chemical Abstracts Service (division of the American Chemical Society)