

Safety data sheet

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BASF Safety data sheet

Date / Revised: 28.01.2025

Product: **Choline Chloride Solution 75%**

Version: 5.1

(30041094/SDS_GEN_SG/EN)

Date of print: 22.10.2025

1. Substance/preparation and manufacturer/supplier identification

Product name:

Choline Chloride Solution 75%

Use: feed additive(s)

Manufacturer/supplier:

BASF South East Asia Pte Ltd.

128 Beach Road #18-01

Guoco Midtown, 189773, Singapore

Telephone: +65 8322 4420

Telefax number: +65 6 334-0330

E-mail address: benny.zou@basf.com

Emergency information:

Singapore Emergency Toll-Free Number:

Telephone: 1800-723-1361

International emergency number:

Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat.5 (oral)

Acute toxicity: Cat.5 (dermal)

Label elements and precautionary statement:

Signal Word:

Warning

Hazard Statement:

H303 + H313

May be harmful if swallowed or in contact with skin.

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Precautionary Statements (Response):

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302 + P312 IF ON SKIN: Call a POISON CENTER or a doctor/physician if you feel unwell.

Other hazards which do not result in classification:

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

Aqueous solution based on:
cholin chloride

Hazardous ingredients

cholin chloride

Content (W/W): $\geq 50\%$ - $\leq 100\%$

CAS Number: 67-48-1

Acute Tox.: Cat. 5 (oral)

Acute Tox.: Cat. 5 (dermal)

4. First-Aid Measures

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:

Symptoms: (Further) symptoms and / or effects are not known so far

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

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Unsuitable extinguishing media for safety reasons:
water jet

Specific hazards:
harmful vapours, carbon oxides, nitrogen oxides, chlorine compounds
The substances/groups of substances mentioned can be released in case of fire. Generation of fumes/fog.

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
Cool endangered containers with water-spray.

6. Accidental Release Measures

Personal precautions:

Use personal protective clothing. Information regarding personal protective measures, see section 8. Ensure adequate ventilation. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Contain with absorbent material (e.g. sand, silica gel, acid binder, general purpose binder, sawdust).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

The product is neither self-ignitable, nor an explosion hazard, nor does it promote fires. No special precautions necessary.

Storage

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

8. Exposure controls and personal protection

Components with occupational exposure limits

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No substance specific occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

9. Physical and Chemical Properties

Form:	aqueous solution	
Colour:	colourless	
Odour:	amine-like	
Odour threshold:	not determined	
pH value:	approx. 5.5 - 6.5 (20 °C)	(ASTM E70)
Melting point:	-18 °C	
Boiling point:	100 °C	
Flash point:	A flash point determination is unnecessary due to the high water content.	
Evaporation rate:	No data available.	
Flammability (solid/gas):	not flammable	
Lower explosion limit:	For liquids not relevant for classification and labelling.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	355 °C	(DIN 51794)

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Thermal decomposition: $\geq 290\text{ °C}$ (DSC (DIN 51007))
 Self heating ability: not applicable, the product is a liquid

SADT: No data available.
 Explosion hazard: Based on the chemical structure there is no indication of explosive properties.

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Vapour pressure: 123 mbar (50 °C)
 23 mbar (20 °C)

Density: 1.1 g/cm³ (20 °C)
 Relative density: 1.1 (20 °C)

Relative vapour density (air): > 1 (calculated)
 (20 °C)
 Heavier than air.

Solubility in water: completely miscible
 Solubility (qualitative) solvent(s): alcohols slightly soluble
 Partitioning coefficient n-octanol/water (log Pow): not applicable for mixtures

Viscosity, dynamic: 15.5 mPa.s (23 °C)
 Viscosity, kinematic: 14.2 mm²/s (23 °C)

Particle characteristics

Particle size distribution: No data available. -
 Specific Surface Area: No data available.

Particle Shape: No data available.

Dustiness: No data available.

10. Stability and Reactivity

Conditions to avoid:
 See SDS section 7 - Handling and storage.

Thermal decomposition: $\geq 290\text{ °C}$ (DSC (DIN 51007))

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Substances to avoid:

None known during use and storage if used according to instructions.

Corrosion to metals: Corrosive effect on metals.

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

Chemical stability:

The product is stable if stored and handled as prescribed/indicated.

Reactivity:

No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
(oral): No data available.

Acute inhalation toxicity

(by inhalation): No data available.

Acute dermal toxicity

(dermal): No data available.

Assessment of acute toxicity

Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Information on: cholin chloride

Acute oral toxicity

Experimental/calculated data:
LD50 rat (oral): 3,150 mg/kg (BASF-Test)

Information on: cholin chloride

Acute inhalation toxicity

Experimental/calculated data:
LC50 rat (by inhalation): > 5.2 mg/l 4 h (BASF-Test)
An aerosol was tested.

Information on: cholin chloride

Acute dermal toxicity

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Experimental/calculated data:
LD50 rat (dermal): > 4,000 mg/kg (similar to OECD guideline 402)

Symptoms

(Further) symptoms and / or effects are not known so far

Irritation

Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:
Skin corrosion/irritation: No data available.

Serious eye damage/irritation: No data available.

Information on: cholin chloride
Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (BASF-Test)

Information on: cholin chloride
Experimental/calculated data:
Serious eye damage/irritation rabbit: non-irritant (BASF-Test)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
No data available.

Information on: cholin chloride
Experimental/calculated data:
guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity:
Not carcinogenic.

Experimental/calculated data:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:

Repeated oral uptake of the substance did not cause damage to the reproductive organs.

Experimental/calculated data:

No data available.

Developmental toxicity

Assessment of teratogenicity:

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses which impaired body weight gain in parental animals. After the uptake of small doses toxicity to development will not be expected in humans.

Specific target organ toxicity (single exposure)

Remarks: No data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No adverse effects were observed after repeated exposure in animal studies.

Experimental/calculated data:

No data available.

Aspiration hazard

May also damage the lung at swallowing (aspiration hazard).

Other relevant toxicity information

The data on toxicology refer to the active ingredient. The product has not been tested. The statement has been derived from the properties of the individual components.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

No data available.

Aquatic invertebrates:

No data available.

Aquatic plants:

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No data available.

Microorganisms/Effect on activated sludge:

No data available.

Chronic toxicity to fish:

No data available.

Chronic toxicity to aquatic invertebrates:

No data available.

Information on: cholin chloride

Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oryzias latipes* (OECD Guideline 203, Flow through.)

The details of the toxic effect relate to the nominal concentration.

Information on: cholin chloride

Aquatic invertebrates:

EC50 (48 h) 349 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration.

Information on: cholin chloride

Aquatic plants:

EC50 (72 h) > 1,000 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration.

No observed effect concentration (72 h) 32 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration.

Information on: cholin chloride

Microorganisms/Effect on activated sludge:

EC10 (17 h) 112.9 mg/l, *Pseudomonas putida* (DIN 38412 Part 8, aerobic)

The details of the toxic effect relate to the nominal concentration.

Information on: cholin chloride

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), 30.2 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)

The details of the toxic effect relate to the nominal concentration.

Information on: cholin chloride

Assessment of terrestrial toxicity:

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: cholin chloride

Soil living organisms:

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LC50 (56 d) 681 mg/kg, Eisenia foetida (OECD Guideline 222)

Analogous: Assessment derived from products with similar chemical character.

No observed effect concentration (56 d) 320 mg/kg, Eisenia foetida (OECD Guideline 207)

Analogous: Assessment derived from products with similar chemical character.

No observed effect concentration (28 d) 18.6 mg/kg, other soil dwelling microorganisms (OECD Guideline 216)

Analogous: Assessment derived from products with similar chemical character.

Information on: cholin chloride

Terrestrial plants:

ER50 > 2100 g/ha

Analogous: Assessment derived from products with similar chemical character.

Mobility

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is expected.

The data refer to the charged form of the substance.

Information on: cholin chloride

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is expected.

The data refer to the charged form of the substance.

Persistence and degradability

Information on: cholin chloride

Elimination information:

93 % BOD of the ThOD (14 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, activated sludge, domestic)

Information on: cholin chloride

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

Bioaccumulation potential

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

The data refer to the charged form of the substance.

Information on: cholin chloride

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

The data refer to the charged form of the substance.

Additional information

Add. remarks environm. fate & pathway:

The product has not been tested. The statements on environmental fate and pathway have been derived from the properties of the individual components.

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Do not release untreated into natural waters.

13. Disposal Considerations

Observe national and local legal requirements.

14. Transport Information

Domestic transport:

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
	Marine pollutant: no
Special precautions for user	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
Proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable

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Special precautions for user None known

Maritime transport in bulk according to IMO instruments

Regulation:	IBC-Code
Product name:	Cholinchloride solutions
Pollution category:	Z
Ship Type:	3

15. Regulatory Information

Other regulations

16. Other Information

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.