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SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.2
Creation Date: July 15, 2019
Revision Date: August 08, 2025

SECTION 1: Identification

1.1 GHS Product identifier

Product name Choline Chloride

1.2 Other means of identification

Product number CCAD300667
Other names -

1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.
Uses advised against no data available

1.4 Supplier's details

Company CATO Research Chemicals Inc.
Address 3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou
Telephone +86-20-81960175

1.5 Emergency phone number

Emergency phone number +86-20-81960175
Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Not classified.

2.2 GHS label elements, including precautionary statements

Pictogram(s) No symbol.
Signal word No signal word
Hazard statement(s) none
Precautionary statement(s)
Prevention none
Response none
Storage none
Disposal none

2.3 Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Choline Chloride	Choline chloride	67-48-1	200-655-4	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Rinse and then wash skin with water and soap.

Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible).

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

To fight fires involving this chemical, you should be equipped with an air line or self-contained breathing apparatus. Extinguish with a dry chemical, carbon dioxide, foam or halon extinguisher. (NTP, 1992)

5.2 Specific hazards arising from the chemical

This chemical is relatively nonflammable. (NTP, 1992)

5.3 Special protective actions for fire-fighters

Use water spray, powder.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

6.2 Environmental precautions

Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid. Aqueous solution.
Colour	Colourless.
Odour	no data available
Melting point/freezing point	Ca. 200 °C. Atm. press.:Ca. 1 013 mBar. Remarks:First signs of an exothermal reaction were denoted at 110°C, the maximum of this reaction was at 200°C.
Boiling point or initial boiling point and boiling range	Ca. 300 °C. Atm. press.:Ca. 1 013 mBar. Remarks:First signs of an subsequent reaction were denoted at 250°C, the maximum of this reaction was at 300°C. However, the nature of the test method does not allow to differentiate between boiling and decomposition temperature.
Flammability	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	60°C(lit.)
Auto-ignition temperature	330 °C. Remarks:No further details available.
Decomposition temperature	no data available
pH	6 - 7. Remarks:Concentration based on Choline Chloride, 60% powder.;5 - 6. Remarks:Concentration based on Choline Chloride, 75% solution.;4 - 6. Remarks:Concentration based on Choline Chloride, 98%.
Kinematic viscosity	dynamic viscosity (in mPa s) = 26.2. Temperature:20°C. Remarks:At 20°C, the behaviour of the test substance was found to be Newtonian over the measured shear range of 10 to 200 1/s.;dynamic viscosity (in mPa s) = 14.1. Temperature:40°C. Remarks:At 40°C, the behaviour of the test substance was found to be Newtonian over the measured shear range of 10 to 200 1/s.
Solubility	Very soluble (NTP, 1992)
Partition coefficient n-octanol/water	Pow = 0. Temperature:25 °C. Remarks:Average of three independent determinations.;log Pow = -3.77. Temperature:25 °C. Remarks:Average of three independent determinations.
Vapour pressure	0 Pa. Temperature:25 °C. Remarks:Modified Grain Method (MPBPWIN v1.43), calculated for pure choline chloride.;2 287.2 Pa. Temperature:25 °C. Remarks:Modified Grain Method (MPBPWIN v1.43), calculated for 75% aqueous solution of choline chloride.
Density and/or relative density	1.1 g/cm³. Temperature:20 °C.
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

On combustion, forms toxic and corrosive fumes including hydrogen chloride. Reacts with strong oxidants.

10.2 Chemical stability

Keep tightly closed.

10.3 Possibility of hazardous reactions

Choline chloride is a quaternary ammonium salt. Quaternary ammonium salts often serve as catalysts in reactions. They are incompatible with many strong oxidizers and reducing agents, such as metal hydrides, alkali/active metals, and organometallics. Quaternary ammonium salts often serve as catalysts in reactions. They are incompatible with many strong oxidizers and reducing agents, such as metal hydrides, alkali/active metals, and organometallics. Unlike the ammonium ion, [NH4]+, and the primary, secondary, or tertiary ammonium cations, the quaternary ammonium cations are permanently charged, independent of the pH of their solution.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of chloride, /sulfur oxides/, and /Nitrogen oxides/.

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD0 - rat - >= 2 790 mg/kg bw. Remarks:Given on three consecutive days, hence LD0 can be calculated as intermittent total dose to 8.37 g/kg bw.
- Inhalation: no data available

- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

A nuisance-causing concentration of airborne particles can be reached quickly when dispersed.

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: LC50 - Leuciscus idus - > 10 000 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 500 mg/L - 48 h.
- Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 500 mg/L - 72 h.
- Toxicity to microorganisms: EC10 - Pseudomonas putida - 112.9 mg/L - 17 h.

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)	IMDG: Not dangerous goods. (For reference only, please check.)	IATA: Not dangerous goods. (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Choline chloride	Choline chloride	67-48-1	200-655-4
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

SECTION 16: Other information

Information on revision

Creation Date July 15, 2019
Revision Date August 08, 2025

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Any questions regarding this SDS, Please send your inquiry to info@cato-chem.com

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