

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 Dimethyldioctadecylammonium Chloride

1.2 Other means of identification

Product number CCHM701195

Other names Dimethyldioctadecylammonium Chloride;dimethyl(dioctadecyl)azanium,chloride;Dimethyldistearylammmonium Chloride

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

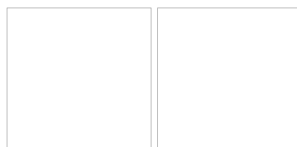
Serious eye damage, Category 1

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H318 Causes serious eye damage

H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P273 Avoid release to the environment.

Response

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

P391 Collect spillage.

Storage

none

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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
Dimethyldioctadecylammonium Chloride	Dimethyldioctadecylammonium chloride	107-64-2	203-508-2	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention .

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

Minimum/Potential Fatal Human Dose

Toxicity ratings: 3 and 4. 3= moderately toxic: probable oral lethal dose (human) 0.5-5 g/kg, between 1 oz and 1 pint (or 1 lb) for 70 kg person (150 lb). 4= very toxic: probable oral lethal dose (human) 50-500 mg/kg, between 1 teaspoon and 1 oz for 70 kg person (150 lb). cationic detergents

Absorption, Distribution and Excretion

14)c-labeled dioctadecyldimethylammonium chloride did not effectively penetrate rabbit skin & human infant abdominal skin.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water in large amounts, powder, alcohol-resistant foam, carbon dioxide.

5.2 Specific hazards arising from the chemical

Combustible. Gives off irritating or toxic fumes (or gases) in a fire.

5.3 Special protective actions for fire-fighters

Use water in large amounts, powder, alcohol-resistant foam, carbon dioxide.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Vacuum spilled material with specialist equipment. If appropriate, moisten first to prevent dusting. Do NOT let this chemical enter the environment. Personal protection: particulate filter respirator adapted to the airborne concentration of the substance.

6.2 Environmental precautions

Vacuum spilled material with specialist equipment. If appropriate, moisten first to prevent dusting. Do NOT let this chemical enter the environment. Personal protection: particulate filter respirator adapted to the airborne concentration of the substance.

6.3 Methods and materials for containment and cleaning up

Activated-sludge treatment resulted in 91.3% removal of dimethyldistearylammonium chloride without redn of the activity of the sludge.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

NO open flames, NO sparks and NO smoking. 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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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 goggles or eye protection in combination with breathing protection.

Skin protection

Protective gloves.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Colour	Powder
Odour	no data available
Melting point/freezing point	149.4 - 151°C
Boiling point or initial boiling point and boiling range	100°C
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	no data available
Auto-ignition temperature	no data available
Decomposition temperature	135°C
pH	no data available
Kinematic viscosity	no data available
Solubility	Virtually insoluble in water.
Partition coefficient n-octanol/water	log Kow= 3.80
Vapour pressure	Pa at 25°C: <0.000001
Density and/or relative density	(at 88°C): 0.84 g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Decomposes on heating. This produces toxic and corrosive fumes.

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

Decomposes on heating. This produces toxic and corrosive fumes.

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 very toxic fumes of /nitrogen oxides and hydrogen chloride/.

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat oral 11,300 mg/kg
- 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

The substance is corrosive to the eyes. The substance is irritating to the skin.

STOT-repeated exposure

no data available

Aspiration hazard

A harmful concentration of airborne particles can be reached quickly when dispersed.

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: Dimethyldioctadecylammonium chloride biodegradation in river water was found to take place in approximately 5 days with degradation occurring faster in river water containing higher levels of sediments and suspended solids(1). Dimethyldioctadecylammonium degradation in rapid creek river water, in Rapid City, SD, was measured with a half life of 4.9-13.8 days(3). In an OECD screening test, at a 2.5 mg/l concentration, dimethyldioctadecylammonium chloride degradation reaches over 90% in 2-4 days and at 10 mg/l concentration, a Zahn-Wellen test found degradation is nearly complete in 10 days(2). A 91-95% dimethyldioctadecylammonium chloride removal rate was observed in a continuous flow activated sludge system(4).

12.3 Bioaccumulative potential

An estimated BCF of 71 was calculated for dimethyldioctadecylammonium chloride(SRC), using a log Kow of 3.80(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low.

12.4 Mobility in soil

The Koc of dimethyldioctadecylammonium chloride is estimated as $1 \times 10^{+10}$ (SRC), using a log Kow of 3.80(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that dimethyldioctadecylammonium chloride is expected to be immobile in soil.

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: Yes

IMDG: Yes

IATA: Yes

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
Dimethyldioctadecylammonium chloride	Dimethyldioctadecylammonium chloride	107-64-2	203-508-2
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:



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- 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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