Chemical Safety Data Sheet MSDS / SDS

Benzethonium chloride SDS

Revision Date:2024-04-25 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Benzethonium chloride

CAS: 121-54-0

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

Company Identification

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

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SECTION 2: Hazards identification

Classification of the substance or mixture

Acute toxicity - Category 3, Oral
Skin corrosion, Sub-category 1B

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

GHS label elements, including precautionary statements

Pictogram(s)

Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P273 Avoid release to the environment.

Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.
P321 Specific treatment (see ... on this label).
P330 Rinse mouth.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P316 Get emergency medical help immediately.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391 Collect spillage.

Storage

P405 Store locked up.

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.

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name:	Benzethonium chloride
Common names and synonyms:	Benzethonium chloride
CAS number:	121-54-0
EC number:	204-479-9
Concentration:	100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

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. Give one or two glasses of water to drink. Refer for medical attention .

Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound may include vomiting, collapse, convulsions and coma. Other symptoms may include corrosion or injury to the mucous membranes. It may cause nausea, esophageal damage and necrosis, hypotension and death. It may also cause dyspnea, cyanosis, paralysis of respiratory muscles possibly leading to asphyxia, and central nervous system depression (possibly with convulsions or preceded by excitement). It has depolarizing muscle relaxant properties. It can cause irritation to the skin, eyes, mucous membranes and upper respiratory tract. Intravenous or intrauterine administration may cause hemolysis. ACUTE/CHRONIC HAZARDS: This compound is highly toxic by ingestion. It is also harmful by inhalation or skin absorption. It is an irritant of the skin, eyes, mucous membranes, and upper respiratory tract. When heated to decomposition this chemical emits very toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and hydrogen chloride gas. (NTP, 1992)
SYMPTOMS: Symptoms of exposure to this compound may include vomiting, collapse, convulsions and coma. ACUTE/CHRONIC HAZARDS: When heated to decomposition this compound emits toxic fumes. (NTP, 1992)

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

Absorption, Distribution and Excretion

Percutaneous absorption is probably insignificant. benzalkonium chloride

SECTION 5: Firefighting measures

Suitable extinguishing media

Alcohol foam, carbon dioxide, dry chemical, water fog Hyamine cmpd

Specific hazards arising from the chemical

Flash point data for this chemical are not available. It is probably combustible. (NTP, 1992)
Flash point data for this chemical are not available. It is probably combustible. (NTP, 1992)

Special protective actions for fire-fighters

Use water spray, powder.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical

enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

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

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.

Conditions for safe storage, including any incompatibilities

Separated from food and feedstuffs. Store in an area without drain or sewer access. Dry.... SOLUTIONS SHOULD BE STORED IN DISTINCTIVE BOTTLES (NEVER IN SOFT DRINK BOTTLES) IN A SAFE PLACE. CATIONIC DETERGENTS

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

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.

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

Eye/face protection

Wear safety goggles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation (not if powder).

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Solid. Solid: particulate/powder.
Colour:	White to off-white.
Odour:	MILD ODOR
Melting point/freezing point:	>= 162 °C. Remarks:Pressure not indicated.
Boiling point or initial boiling point and boiling range:	>= 162 °C. Remarks:Pressure not indicated.
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:	78°C(lit.)
Auto-ignition temperature:	> 400 °C. Remarks:No self ignition observed under the test conditions.
Decomposition temperature:	no data available
pH:	PH OF 1% AQ SOLN IS BETWEEN 4.8 & 5.5
Kinematic viscosity:	no data available
Solubility:	10 to 50 mg/mL at 64° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Pow = 1.08. Temperature:20 °C.
Vapour pressure:	0 Pa. Temperature:25 °C.;0.001 Pa. Temperature:79 °C.;0.003 Pa. Temperature:100 °C.
Density and/or relative density:	1.1. Temperature:20 °C.
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

Decomposes on burning. This produces toxic and corrosive fumes including hydrogen chloride and nitrogen oxides.

Chemical stability

no data available

Possibility of hazardous reactions

BENZETHONIUM CHLORIDE is incompatible with strong oxidizing agents. Incompatible with soap and anionic detergents. Can react with nitrates. Sensitive to light. Acids cause it to precipitate from aqueous solutions of >2% concentration. Stable for two weeks at temperatures up to 140 F, (NTP, 1992).

Conditions to avoid

no data available

Incompatible materials

Incompatibilities: incompatible with & inactivated by soaps, anionic detergents, organic material, & nitrates.

Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of /hydrogen choride and nitrogen oxides/.

SECTION 11: Toxicological information

Acute toxicity

Oral: no data available

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

Repeated or prolonged contact with skin may cause dermatitis.

Aspiration hazard

no data available

SECTION 12: Ecological information

Toxicity

Toxicity to fish: LC50 Pimephales promelas 1600 ug/l/96 hr /Conditions of bioassay not specified

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 0.249 mg/L - 24 h.

Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 0.12 mg/L - 72 h.

Toxicity to microorganisms: no data available

Persistence and degradability

Cationic surfactants had nobacteriostatic or bacteriolytic action on heterotrophic bacterial population isolated from sewage & river waters, cyclical alkylammonium cmpd are not degraded.

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

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

UN Number

ADR/RID: no data available
IMDG: no data available
IATA: no data available

UN Proper Shipping Name

ADR/RID: no data available
IMDG: no data available
IATA: no data available

Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)
IMDG: 6.1 (For reference only, please check.)
IATA: 6.1 (For reference only, please check.)

Packing group, if applicable

ADR/RID: III (For reference only, please check.)
IMDG: III (For reference only, please check.)
IATA: III (For reference only, please check.)

Environmental hazards

ADR/RID: Yes
IMDG: Yes
IATA: Yes

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

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.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

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/