
Material Safety Data Sheet

Product Name	<u>Benzethonium chloride</u>
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:**Product Description:** Benzethonium chloride**Synonyms:** (Diisobutylphenoxyethoxyethyl)dimethylbenzylammonium chloride, Phemerol chloride**CAS-No:** 121-54-0**EC-No.:** 204-479-9**Molecular Formula:** C₂₇H₄₂ClNO₂**REACH Registration No:** A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.**1.2. Relevant identified uses of the substance or mixture and uses advised against:****Recommended Use:** Laboratory chemicals, manufacturing substance**1.3. Details of the supplier of the safety data sheet:**

- **Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad,
Email: info@finarchemicals.com
Web: www.finarchemicals.com
- **E-Mail Address** safety@finarchemicals.com; info@finarchemicals.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717
- Registered office No: +91 - 79 - 40040085

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 3, Oral, H301

Skin corrosion, Category 1B, H314

Acute aquatic toxicity, Category 1, H400

Chronic aquatic toxicity, Category 1, H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label Elements:

Labeling according Regulation (EC) No 1272/2008

Pictogram



Signal word **Danger**

Hazard statement(s)

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H400 short term (acute) aquatic hazard

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P260 Do not breathe dust or mist.

P273 Avoid release to the environment.

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

Response

P301 + P310 + P330 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

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

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

2.3. Other Hazards: None Known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Benzethonium chloride

CAS-No: 121-54-0

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Benzethonium chloride	121-54-0	204-479-9	>95

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

- **If inhaled**

Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Immediate medical attention is required.

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- **If swallowed**

Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2. Most important symptoms and effects, both acute and delayed:

Cyanosis, Convulsions, Coma

Irritation and corrosion, Cough, Shortness of breath

Risk of blindness

4.3. Indication of any immediate medical attention and special treatment needed:

No data available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use of Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable Extinguishing Media- For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of: Hydrogen chloride gas, nitrogen oxides

5.3. Advice for firefighters:

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus.

Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information:

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

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6.2. Environmental precautions:

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection.

Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe (dust, vapor, mist, gas).

Do not ingest. If swallowed, then seek immediate medical assistance.

7.2. Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry and well-ventilated place. Light sensitive, hygroscopic

7.3. Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Contains no substances with occupational exposure limit values.

8.2. Exposure Controls:

- **Appropriate Engineering Controls:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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Eye & Face Protection-

Tightly fitting safety goggles

Body Protection-

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection-

Required when dusts are generated.

Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic substance.

Environmental Exposure Controls-

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** White
- **Physical State:** Powder (Solid)
- **Odour:** Odourless
- **pH:** 4.8-5.5
- **Melting Point:** 158 - 163 °C
- **Ignition Temperature:** ca. 380 °C
- **Decomposition Temperature:** 162 - 164 °C
- **Vapor Pressure:** < 0.001 hPa at 25 °C
Method: OECD Test Guideline 104
- **Relative Vapor Density:** No data available
- **Density:** No data available
- **Volatility:** No data available
- **Bulk Density:** ca.440 kg/m³
- **Odor Threshold:** No data available
- **Viscosity:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Partition coefficient: n-octanol/water:** log Pow: 1.08 (20 °C)

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- **Ionicity (in Water):** No data available
- **Boiling Point/Range:** No data available
- **Flash Point:** No data available

9.2. Other information: No data available

Molecular Formula: C₂₇H₄₂ClNO₂

Molecular Weight: 448.08 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2. Chemical stability:

The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions:

Violent reactions possible with: Strong oxidizing agents.

10.4. Conditions to avoid:

Strong Heating (Decomposition)

10.5. Incompatible materials:

No data available

10.6. Hazardous decomposition products:

In the event of fire: See section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity

LD50 Rat: 295 mg/kg

OECD Test Guideline 401

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

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Acute Inhalation Toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract tract.

Acute Dermal Toxicity

No data available

Skin corrosion/irritation

Rabbit

Result: Causes burns.

(External MSDS)

Causes burns.

Serious eye damage/eye irritation

Causes serious eye damage. Risk of blindness!

Sensitisation

Sensitisation test (Magnusson and Kligman):

Result: negative

Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vitro

Mutagenicity (mammal cell test):

Result: negative

Method: OECD Test Guideline 476

Ames test

Result: negative

Method: OECD Test Guideline 471

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

Method: OECD Test Guideline 473

Carcinogenicity

No data available

Reproductive toxicity

No data available

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Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further Information

After absorption:

Systemic effects:

Cyanosis, Convulsions, Coma

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity:**

Toxicity to fish:

LC50 *Oncorhynchus mykiss* (rainbow trout): 1.15 mg/l; 96 h

OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:

EC50 *Daphnia magna* (Water flea): 0.22 mg/l; 48 h

OECD Test Guideline 202

Toxicity to algae:

IC50 *Pseudokirchneriella subcapitata* (green algae): 0.12 mg/l; 72 h

OECD Test Guideline 201

Toxicity to bacteria:

EC50 activated sludge: 35.7 mg/l; 3 h

OECD Test Guideline 209

12.2 Persistence and degradability:

Biodegradability

0 %; 28 d

OECD Test Guideline 301B

Not biodegradable

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12.3 Bioaccumulate potential:

Partition coefficient: n-octanol/water

log Pow: 1.08 (20 °C)

Bioaccumulation is not expected.

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment:

PBT/vPvB assessment not available as chemical safety assessment not required/not Conducted

12.6 Other adverse effects:

Very toxic to aquatic life with long lasting effects.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	UN 2923		
14.2 Proper shipping name	CORROSIVE SOLID, TOXIC, N.O.S. (BENZETHONIUM CHLORIDE)		
14.3 Class	8 (6.1)		
14.4 Packing group	III		
14.5 Environmentally hazardous	Yes		
14.6 Special precautions for user	Yes Tunnel restriction code E	no	Yes EmS F-A S-B
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not Revalent			

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National Legislation

Storage class 6.1C

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

- 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

Training advice

Provide adequate information, instruction and training for operators.

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Labelling

Hazard pictograms



Signal word: Danger

Hazard statement(s)

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Precautionary statement(s)

Prevention

- P260 Do not breathe dust or mist.
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Response

- P301 + P310 + P330 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (on hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

References: Not available

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