Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

   **Product Description:** Benzethonium chloride
   **Synonyms:** (Diisobutylphenoxyethoxyethyl)dimethylbenzylammonium chloride, Pheremol chloride
   **CAS-No:** 121-54-0
   **EC-No:** 204-479-9
   **Molecular Formula:** C_{27}H_{42}ClNO_{2}
   **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
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.
Product Name: Benzethonium chloride

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzethonium chloride</td>
<td>121-54-0</td>
<td>204-479-9</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

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.
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.
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.
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)
Material Safety Data Sheet

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Benzethonium chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ionicity (in Water):</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information: No data available

Molecular Formula: $C_{27}H_{42}ClNO_2$

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.
Material Safety Data Sheet

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Benzethonium chloride</th>
</tr>
</thead>
</table>

**Acute Inhalation Toxicity**
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory 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
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
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.
SECTION 14: Transport information

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

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.
Labelling

Hazard pictograms

Signal word: Danger

Hazard statement(s)
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P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

References: Not available

Created: 28/07/2020
Disclaimer:

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