OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

Regd Office: Unit no 12, 1st Floor,
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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

BENZALKONIUM CHLORIDE

Pure

MSDS CAS: - 63449-41-2

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name: BENZALKONIUM CHLORIDE Pure

CAS#: - 63449-41-2

Synonym: Zephiral, Zephiran chloride, Osvan, Paralkan, Germitol, Germicin, Enuclen, Drapolex, Drapolene, Cequartyl, Benzalkonium A, Benirol, Bayclean, Ammonyx; Alkyl dimethylbenzyl ammonium chloride;

Chemical Name: Ammonium, alkyldimethylbenzyl-, Chloride

Chemical Formula: Not available.

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: **OXFORD LAB FINE CHEM LLP**
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
Navghar, Vasai (East). Palghar - 401 210.
Mumbai, Maharashtra, INDIA.
Tel: 91-250-2390989
Tel/Fax: 91-250-2390032

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Benzalkonium chloride	8001-54-5	100

Toxicological Data on Ingredients: Benzalkonium chloride: ORAL (LD50): Acute: 240 mg/kg [Rat].

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Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]. The substance may be toxic to kidneys, liver, heart, gastrointestinal tract, cardiovascular system, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

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Section 4: First Aid Measures (Continued)

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion: **Not available.**

Section 5: Fire and Explosion Data

Flammability of the Product: **May be combustible at high temperature.**
Auto-Ignition Temperature: **Not available.**
Flash Points: **OPEN CUP: 250°C (482°F).**
Flammable Limits: **Not available.**
Products of Combustion: **Not available.**
Fire Hazards in Presence of Various Substances: **Slightly flammable to flammable in presence of heat.**
Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards: **As with most organic solids, fire is possible at elevated temperatures**
Special Remarks on Explosion Hazards:
Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion
hazard.

Section 6: Accidental Release Measures

Small Spill: **Use appropriate tools to put the spilled solid in a convenient waste disposal container.**
Large Spill: **Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.**

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Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, moisture.

Storage:

Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: **Not available.**

Section 9: Physical and Chemical Properties

Physical state and appearance	**: Solid. (Amorphous solid powder or lumps.)**
Odor	**: Aromatic.**
Taste	**: Bitter. (Strong.)**
Molecular Weight	**: Not available.**
Color	**: White to yellowish.**
pH (1% soln/water)	**: Not available.**
Boiling Point	**: Not available.**
Melting Point	**: Decomposition temperature: >140°C (284°F)**
Critical Temperature	**: Not available.**

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Section 9: Physical and Chemical Properties (Continued)

Specific Gravity : 0.98 (Water = 1)
Vapor Pressure : Not applicable.
Vapor Density : Not available.
Volatility : Not available.
Odor Threshold : Not available.
Water/Oil Dist. Coeff. : Not available.
Ionicity (in Water) : Not available.
Dispersion Properties : See solubility in water, acetone.
Solubility:
Easily soluble in cold water, hot water. Soluble in acetone. Very slightly soluble in diethyl ether. Very soluble in alcohol. Soluble in benzene. Solubility in Benzene: 1 g dissolves in 6 ml of benzene. Solubility in Ether: 1 g dissolves in 100 ml of Ether

Section 10: Stability and Reactivity Data

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Excess heat, dust generation, moisture, incompatible materials.
Incompatibility with various substances: Reactive with oxidizing agents.
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Reactivity: Hygroscopic. Also incompatible with nitrates, anion detergents
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.
Toxicity to Animals: Acute oral toxicity (LD50): 240 mg/kg [Rat].
Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]. May cause damage to the following organs: kidneys, liver, heart, gastrointestinal tract, cardiovascular system, central nervous system (CNS).

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Section 11: Toxicological Information (Continued)

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive).

Special Remarks on Toxicity to Animals: **Not available.**

Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagen) and cause adverse reproductive effects (fetotoxicity, fertility (female)) based on laboratory experiments on animals.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes severe skin irritation and burns. Eyes: Causes sever eye irritation and burns. Ingestion: Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal (digestive) tract burns. May affect behavior (central nervous system depression, depression) and metabolism. May produce burning pains in the mouth, throat, and abdomen, profuse salivation, muscle weakness. May also affect the respiratory system and cardiovascular system, liver and kidneys. Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath, and delayed lung edema. Causes chemical burns to the respiratory tract. Causes irritation of the mucous membranes. Chronic Potential Health Effects: May affect material (mutagenic) and may cause adverse reproductive effects. Prolonged or repeated skin contact may cause dermatitis. Repeated or prolonged exposure may cause allergic reactions in sensitive individuals. May cause cyanosis of the skin and lips caused by lack of oxygen.

Section 12: Ecological Information

Ecotoxicity: **Not available.**

BOD5 and COD: **Not available.**

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: **Not available.**

Special Remarks on the Products of Biodegradation: **Not available.**

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

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Section 14: Transport Information

14.1. Land transport (ADR-RID)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
UN N° : 3265
H.I. nr : 80
ADR - Class : 8
Labelling – Transport : 8 : Corrosive substance.
ADR – Group : III

14.2. Sea transport (IMDG) [English only]

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
UN N° : 3265
IMO-IMDG - Class or division : 8 : Corrosive substance.
IMO-IMDG - Packing group : III

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
UN N° : 3265
IATA - Class or division : 8 : Corrosive substance.
IATA - Packing group : III

Section 15: Other Regulatory Information

Federal and State Regulations: No products were found.
Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Other Classifications:
WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC). CLASS E: Corrosive solid.

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Section 15: Other Regulatory Information (Continued)

DSCL (EEC):
R21/22- Harmful in contact with skin and if swallowed. R34- Causes burns. R50- Very toxic to aquatic organisms. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS (U.S.A.):
Health Hazard: 3
Fire Hazard: 1
Reactivity: 0
Personal Protection: j

National Fire Protection Association (U.S.A.):
Health: 3
Flammability: 1
Reactivity: 0
Specific hazard:

Protective Equipment:
Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

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