Benzalkonium chloride 50 % solution

Section 1: Chemical Product and Company Identification

Product Name: Benzalkonium chloride 50 % solution
Catalog Codes: 102
Synonym: No information
Chemical Name: Benzalkonium chloride 50 % solution
Chemical Formula: C22H40ClN

Contact Information:
Expresolv Ltd.
Plot No.54 Survey No.108/P Ozone Industrial Park
Phase-2, Bavla-Bagodara highway, Village: Bhayla
Ta: Bavla, Dist.: Ahmedabad, Gujarat, PIN:382220
Phone: +91-7069552255, email: info@expresolv.com
CIN No.: U51909GJ2016PLC092972

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS No.	% by Weight
Benzalkonium chloride 50 % solution	8001-54-5	100 %

Toxicological Data on Ingredients:

Benzalkonium chloride 50 % solution: ORAL (LD50): Acute: 1230 mg/kg [Rat]. 1360 mg/kg [Mouse]. 1040 mg/kg [Rabbit]. DERMAL (LD50): Acute: 2000 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator), of ingestion.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:

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

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation:
If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately
Serious Inhalation: Not available.
Ingestion:
Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately
Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Carbon dioxide (CO 2). Powder. Water spray. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. CO 2, dry chemical, dry sand, alcohol-resistant foam
Auto-Ignition Temperature: NA
Flash Points: NA
Flammable Limits: Not available.
Products of Combustion: These products are carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, 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: When heated to decomposition it emits acrid smoke and irritating fumes. COMBUSTIBLE.
Special Remarks on Explosion Hazards: A mixture of Benzalkonium chloride 50 % solution with 58% sulfuric acid decomposes explosively at about 180 deg. C.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the

sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. 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, acids.

Storage:

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Sensitive to light. Store in light-resistant containers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Gloves. A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Vapor respirator is recommended if exposure limits are exceeded or if irritation or other symptoms are experienced. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor 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:

TWA: 10 from AIHA [United States] TWA: 44.2 (mg/m3) from AIHA [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odour: Colorless - Light yellow

Taste: NA

Molecular Weight: 354.1 g/mole

PH: NA

Boiling Point: No data available

Melting Point: - No data available

Critical Temperature: No data available

Specific Gravity: NA

Vapour Pressure: 23 hPa @ 20 °C
Vapour Density: No information available
Volatility: Not available.
Odour Threshold: NA
Ionicity (in Water): Not available.
Dispersion Properties: No information available.
Solubility: No information available.

Section 10: Stability and Reactivity Data

Stability: Stable under normal conditions.
Instability Temperature: Not available.
Conditions of Instability: Heat, ignition sources, incompatible materials
Incompatibility with various substances: Strong bases, Oxidizing agent
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Reactivity: NA
Special Remarks on Corrosively: NA
Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: No information
Toxicity to Animals:
No information
Chronic Effects on Humans:
No information
Other Adverse Effects: The toxicological properties have not been fully investigated.
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation and skin burns. Eyes: Causes eye irritation and eye burns. Ingestion: Harmful if swallowed. Causes gastrointestinal/digestive tract irritation and burns. May affect behaviour (central nervous system depression, depression) and metabolism. May produce burning pains in the mouth, throat, and abdomen, profuse salivation, and muscle weakness. May also affect the respiratory system and cardiovascular system, liver and kidneys.
Inhalation: May cause respiratory tract and mucous membrane irritation with sore throat, coughing, shortness of breath, and delayed lung edema. May cause chemical burns to the respiratory tract. High vapour concentrations may cause nervous system effects. 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:
Ecotoxicity in water (LC50): 770 mg/l 48 hours [Fish (Pimephales promelas (Flathead minnow))]. 480 mg/l 72 hours [Fish (Pimephales promelas (Flathead minnow))]. 460 mg/l 96 hours [Fish (Pimephales promelas (Flathead minnow))]. 10 ppm 96 hours [Fish (Lipomas macro chirus (Bluegill sunfish))]. 15 ppm 96 hours [Fish (Menidia beryllina (tidewater silverside fish))].
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: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Consult with Local and Regional (State) authorities (waste regulators). Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

UN number

ADR/RID: -1760 (Corrosive Material)

UN proper shipping name

ADR/RID: Benzalkonium chloride 50 % solution

IMDG: Benzalkonium chloride 50 % solution

IATA: Benzalkonium chloride 50 % solution)

Transport hazard class(es)

ADR/RID: - 8

IMDG: - 8

IATA: 8

Packaging group

ADR/RID: - II

IMDG: - II

IATA: II

Special precautions for user: No data available

Further information : No data available

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Benzalkonium chloride 50 % solution Minnesota: Benzalkonium chloride 50 % solution Massachusetts RTK: Benzalkonium chloride 50 % solution TSCA 8(b) inventory: Benzalkonium chloride 50 % solution

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R20/22- Harmful by inhalation and if swallowed. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

HMIS (U.S.A.):

Health Hazard: 3
Fire Hazard: 1
Reactivity: 0
Personal Protection: h
National Fire Protection Association (U.S.A.):
Health: 3
Flammability: 1
Reactivity: 0
Specific hazard:
Protective Equipment:
Gloves. Lab coat. Vapour respirator. Be sure to use an

Section 16: Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall *Expresolv Ltd* be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages.

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