

Material Safety Data Sheet

Benzalkoniumchloride, 50 wt% Aq.Solution

ACC# 87924

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzalkoniumchloride, 50 wt% Aq.Solution

Catalog Numbers: AC263820000, AC263820010

Synonyms: Ammonium, alkyl dimethylbenzyl-, chloride; Alkyl dimethylbenzyl ammonium chloride; Alkyl dimethyl(phenylmethyl)quaternary ammonium chlorides; Quaternary ammonium compounds, alkylbenzyl dimethyl, chlorides; Zephiran chloride

Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
8001-54-5	Benzalkonium chloride	50	unlisted
7732-18-5	Water	Balance	231-791-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear colorless to faint yellow liquid.

Danger! Corrosive. Causes eye and skin burns. Harmful if swallowed. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. May cause central nervous system depression. This substance has caused adverse reproductive and fetal effects in animals. Hygroscopic (absorbs moisture from the air). Possible sensitizer.

Target Organs: Kidneys, heart, central nervous system, liver, gastrointestinal system.

Potential Health Effects

Eye: Causes severe eye irritation and burns.

Skin: Causes severe skin irritation and burns. Exposure may cause skin lesions with cutaneous necrosis and scarring.

Ingestion: Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause central nervous system depression. Ingestion may produce burning pains in the mouth, throat and abdomen, profuse salivation, muscle weakness, labored breathing, circulatory shock, and possible cardiovascular collapse.

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 membrane.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Repeated or prolonged exposure may cause allergic reactions in sensitive individuals. May cause cyanosis - a blue-gray coloring of the skin and lips caused by a lack of oxygen.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: If cyanosis is severe, intravenous injection of Methylene Blue, 1mg/kg of body weight may be of value. Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use extinguishing media most appropriate for the surrounding fire. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: 250 deg C (482.00 deg F)

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.

Storage: Keep from freezing. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Store protected from moisture. Store below 40°C.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Benzalkonium chloride	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Benzalkonium chloride: No OSHA Vacated PELs are listed for this chemical. Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear colorless to faint yellow

Odor: aromatic odor

pH: 6.0-9.0 (10% aq soln.)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: > 140 deg C

Solubility: Soluble.

Specific Gravity/Density: 0.9800g/cm³

Molecular Formula: Not applicable.

Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, nitrates, moisture, anion detergents.

Hazardous Decomposition Products: Hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen, ammonia.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 8001-54-5: B03150000

CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 8001-54-5:

Draize test, rabbit, eye: 100 ug;

Draize test, rabbit, eye: 1 mg/24H Severe;

Draize test, rabbit, eye: 10 mg Mild;

Draize test, rabbit, skin: 50 mg/24H Moderate;
Oral, rat: LD50 = 240 mg/kg;

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity:

CAS# 8001-54-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: Intravaginal, rat: TDLo = 100 mg/kg (female 1 day(s) after conception) Effects on Embryo or Fetus - fetal death.;
Intravaginal, rat: TDLo = 50 mg/kg (female 1 day(s) after conception) Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus).

Reproductive Effects: Intravaginal, rat: TDLo = 50 mg/kg (female 1 day(s) after conception) Fertility - litter size (e.g. # fetuses per litter; measured before birth).; Intravaginal, rat: TDLo = 100 mg/kg (female 1 day(s) after conception) Fertility - post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants).

Mutagenicity: DNA Repair: Bacillus subtilis = 50 ug/L.; Sister Chromatid Exchange: Hamster, Embryo = 1 mg/L.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Bacteria: Phytobacterium phosphoreum: EC50 = 0.6 mg/L; 15 min; Microtox test at 15°C

Fish: Striped bass: LC50 = 1.5 mg/L; 24-96 Hr; (fingerling) Static bioassay

Fish: Striped bass: LC50 = 0.5 mg/L; 24-96 Hr; (larvae) Static bioassay

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	CORROSIVE LIQUID NOS (BENZALKONIUMCHLORIDE)
Hazard Class:	8	8
UN Number:	UN3265	UN1760
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 8001-54-5 is not listed on the TSCA inventory. It is for research and development use only.

CAS# 7732-18-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 8001-54-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C N

Risk Phrases:

R 21/22 Harmful in contact with skin and if swallowed.
R 34 Causes burns.
R 50 Very toxic to aquatic organisms.

Safety Phrases:

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 8001-54-5: 3
CAS# 7732-18-5: No information available.

Canada - DSL/NDSL

CAS# 8001-54-5 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of E, D1B, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 5/06/1999

Revision #3 Date: 7/08/2005

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 Fisher 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, howsoever arising, even if Fisher has been advised of the possibility of such damages.