

MATERIAL SAFETY DATA SHEET



EMERGENCY TELEPHONE 800-424-9300 (Chemtrec)
Lonza Inc.90 Boroline Road Allendale NJ 07401
800-777-1875 (9am - 5pm) 309-697-7200 (After 5pm)

Health : 3
Flammability : 2
Reactivity : 0

95311 Barquat 4280-Z

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MATERIAL Barquat 4280-Z	DATE ISSUED 10/26/2004 - Revision	DOT HAZARD CLASSIFICATION 8, PG II
CAS NO. Mixture	SUPERSEDES 08/29/2003	DOT SHIPPING NAME Disinfectant liquid, corrosive n.o.s.
FORMULA Mixture		DOT LABEL Class 8 IMDG Classification Corrosive liquid,flammable n.o.s. Marine pollutant

CHEMICAL NAME (Active): Mixture of Alkyl (C12-18)dimethylbenzylammonium chloride and Alkyl (C12-68%, C14-32%) dimethylethylbenzyl-ammonium chloride

***** I - INGREDIENTS *****

	APPROXIMATE WEIGHT %	TWA/TLV
Quaternary ammonium compounds, benzyl- C12-18-alkyldimethyl, chlorides (CAS No. 68391-01-5)	40	None established
Quaternary ammonium compounds, C12-14- alkyl [(ethylphenyl)methyl]dimethyl, chlorides (CAS No. 85409-23-0)*	40	None established
Ethyl alcohol (CAS No. 64-17-5)	10	1000 ppm OSHA PEL 1000 ppm ACGIH TLV
Water (CAS No. 7732-18-5)	10	None established

* This substance is a mixture of N-Dodecyl-N,N-dimethyl-N-ethylbenzylammonium chloride, CASRN 27479-28-3 and N-Tetradecyl-N,N-dimethyl-N-ethylbenzylammonium chloride, CASRN 27479-29-4

***** II - PHYSICAL AND CHEMICAL PROPERTIES *****

APPEARANCE Clear, pale yellow liquid	pH 6.5 - 8.3 (100 g/l)
VISCOSITY <100 cPs @ 25°C	ODOR Benzaldehyde-like
BOILING POINT Not known	MELTING OR FREEZING POINT -10 °C
VAPOR DENSITY (Air=1) Not applicable	VAPOR PRESSURE (mm Hg) Not known
PERCENT VOLATILE (by weight) 20 %	SPECIFIC GRAVITY (WATER = 1) 0.94 @ 25°C
EVAPORATION RATE (Butyl Acetate=1) <1	SOLUBILITY IN WATER Soluble

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***** III - FIRE AND EXPLOSION INFORMATION *****

FLASH POINT >117°F (Setaflash Closed Tester) AUTO IGNITION TEMPERATURE Not known
LOWER EXPLOSION LIMIT (%) Not applicable UPPER EXPLOSION LIMIT (%) Not applicable
EXTINGUISHING MEDIA FOAM X ALCOHOL FOAM X CO₂ X
DRY CHEMICAL X WATER X OTHER

***** IV - HEALTH EFFECTS INFORMATION *****

SPECIAL FIRE FIGHTING PROCEDURES:

Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Products of combustion are toxic.

PRIMARY ROUTES OF ENTRY - SKIN CONTACT X EYE CONTACT X
INHALATION X INGESTION

EFFECTS OF OVEREXPOSURE

Based on the available animal toxicity information for this and closely related materials, it is anticipated that direct skin or eye contact may produce severe irritation and/or burns with possible irreversible damage. May be fatal if ingested. Ingesting can cause immediate burning pain in the mouth, throat and abdomen; resulting in severe swelling of the epiglottal tissue of the larynx. Ingestion can also result in muscular paralysis affecting the ability to breathe; causing circulatory shock and/or convulsions.

OVEREXPOSURE MAY AGGRAVATE EXISTING CONDITIONS:

No effects indicated.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician not available, flush for additional 15 minutes and then transport victim to medical care.

Skin: Wash with large amounts of running water, and soap if available, for 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminate shoes before reuse.

Ingestion: If swallowed, immediately give 3-4 glasses of water. DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person.

Inhalation: Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention.

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***** IV - HEALTH EFFECTS INFORMATION (continued)*****

CHEMICALS LISTED AS CARCINOGEN BY:

NATIONAL TOXICOLOGY PROGRAM - No
I.A.R.C. MONOGRAPHS - No
OSHA - No

NOTE TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage. Take measures against circulatory shock. Breathing may need support, either through use of manually or mechanically measures. Administer oxygen, if having difficulty with breathing.

***** V - REACTIVITY INFORMATION *****

STABILITY: STABLE X CONDITIONS TO AVOID None known

UNSTABLE

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may produce toxic organic and amine vapors/fumes, hydrogen chloride and oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION

MAY WILL NOT X
OCCUR OCCUR

CONDITIONS TO AVOID

None known

INCOMPATIBILITY (MATERIALS TO AVOID)

WATER OTHER X Strong oxidizing or reducing agents

***** VI - SPILL AND DISPOSAL INFORMATION *****

STEPS TO BE TAKEN IN CASE OF MATERIAL SPILL OR RELEASE

DANGER! Corrosive, flammable liquid. Floors may become slippery. Wear appropriate protective equipment and NIOSH approved respirator where mists or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred).

Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers for recovery or disposal. Keep spill out of sewers and open bodies of water.

WASTE DISPOSAL METHOD

Dispose of in compliance with all Federal, state and local laws and regulations. Incineration is the preferred method. If incinerated avoid smoke.

PACKAGING DISPOSAL METHOD

Triple rinse (or equivalent). Then offer for recycle or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, if permitted by state and local authorities. If incinerated avoid smoke.

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***** VII - PERSONAL PROTECTION INFORMATION *****

ENGINEERING CONTROLS

In processes where mists or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices.

RESPIRATORY PROTECTION

In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls.

PROTECTIVE GLOVES

Rubber or neoprene, when needed, to prevent skin contact.

EYE PROTECTION

Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions.

OTHER PROTECTIVE EQUIPMENT

Eye wash; safety shower; protective clothing (long sleeves, coveralls or other, as appropriate), when needed, to prevent skin contact.

***** VIII - STORAGE AND HANDLING *****

PRECAUTIONS FOR STORAGE AND HANDLING:

Store at or near room temperature. Keep containers tightly closed when not in use. Do not store above 140 °C.

***** IX - TOXICOLOGY & ECOTOXICOLOGY INFORMATION *****

TOXICITY

The toxicity information provided below is for this material and component(s) of this material.

ACUTE

- Oral LD₅₀ (rat): 250 mg/kg
- Dermal LD₅₀ (rabbit): 3400 mg/kg
- Inhalation LC₅₀: 86 mg/L
- Eye irritation (rabbit): Severe irritant.
- Dermal irritation (rabbit): Severe irritant.
- Dermal corrosivity (rabbit - DOT): Corrosive.

For N-Alkyl (C12-18)-N,N-dimethyl-N-benzylammonium chloride:

- Photosensitization (guinea pig): Not a contact sensitizer or photosensitizer.

ECOTOXICITY

AQUATIC

For Barquat 4250-Z:

- LC₅₀ (rainbow trout - 96-hours): 0.3 mg/l
- LC₅₀ (fathead minnow - 96-hours): 0.2 mg/l
- EC₅₀ (Daphnia magna - 48-hours): 0.035 mg/l

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***** X - MISCELLANEOUS AND REGULATORY INFORMATION *****

INTERNATIONAL INVENTORY STATUS

The components of this product are listed on the following chemical inventory lists: Australian AICS; Canadian NDSL; European Union EINECS; Japanese ENCS; Philippines PICCS and U.S. TSCA.

CANADIAN PCP REGULATION ON PESTICIDES

This product is a Canadian PCP registered pesticide, PCP Registration No. 21901. It can only be used commercially in Canada for the PCP registered applications listed on the product label.

CANADIAN WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM(WHMIS) CLASSIFICATION

This product has a WHMIS classification of D1b, E

EC Biocidal Product Directive 98/8/EC

All components in this product are in compliance with the EU Biocidal Product Directive 98/8/EC (BPD).

EUROPEAN CLASSIFICATION & LABELLING in accordance with EC Directive 67/548/EEC

Hazard Symbols: Corrosive and Dangerous for the environment

Risk Phrase(s):

- R22: Harmful if swallowed.
- R34: Causes burns.
- R50: Very toxic to aquatic organisms.

Safety Phrases:

- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28.2: After contact with skin, wash immediately with plenty of water and soap.
- S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
- S61: Avoid release to the environment. Refer to special instructions / Safety data sheets.

U.S. FEDERAL LEVEL REGULATIONS:

TOXIC SUBSTANCES CONTROL ACT (TSCA INVENTORY) STATUS:

The components in this product are currently listed on the EPA TSCA 8(b) inventory.

TSCA Section 12(b) Export Notification

Components present in this product which, if exported, could require either annual or one-time reporting under this regulation are as follows:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

EPA REGULATION ON PESTICIDES

This product is an EPA FIFRA registered pesticide, EPA Registration No. 6836-23. It can only be used commercially in the United States for EPA registered application(s) listed on the product label.

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***** X - MISCELLANEOUS AND REGULATORY INFORMATION (continued) *****

U.S. FEDERAL LEVEL REGULATIONS:(continued)

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of 1980 requires notification of the National Response Center (Telephone 800-424-8802) in the event of a release of quantities of the following hazardous materials contained in this product, if the release is equal to or greater than the Reportable Quantities (RQs) listed in 40 CFR 302.4:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

SARA Title III, Sections 302/304 (Superfund Amendments and Reauthorization act of 1986) - This act requires emergency planning, including agency notification, for possible release of the following components of this material, based upon the Threshold Planning Quantities (TPQs) and release Reportable Quantities (RQs) listed for the Components in 40 CFR 355:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

SARA Title III Sections 311/312 - This act requires reporting under the Community Right-to-Know provisions due to the inclusion of the following components of this material in one or more of the five hazard categories listed in 40 CFR 370:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Hazard *) Categories</u>
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	A
Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides	85409-23-0	A
Ethyl alcohol	64-17-5	F

*) The five hazard categories are as follows: F=FIRE HAZARD; S= SUDDEN RELEASE OF PRESSURE; R=REACTIVE; A=IMMEDIATE (ACUTE) HEALTH HAZARD; C=DELAYED (CHRONIC) HEALTH HAZARD

SARA Title III Section 313 - This act requires submission of annual reports of the releases of the following components of this material if the threshold reporting quantities as listed in 40 CFR 372, are met or exceeded:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

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***** X - MISCELLANEOUS AND REGULATORY INFORMATION (continued) *****

STATE RIGHT-TO-KNOW REGULATIONS:

CALIFORNIA PROPOSITION 65 - Components present in this material which the State of California has found to cause cancer, birth defects or other reproductive harm are as follows:

AS A CANCER HAZARD

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Benzene	71-43-2	200 ppm
Benzyl chloride	100-44-7	100 ppm
N-Nitrosodimethylamine	62-75-9	1 ppm
Propylene oxide	75-56-9	10 ppm

AS A REPRODUCTIVE HAZARD

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Benzene	71-43-2	200 ppm
Toluene	108-88-3	300 ppm

MASSACHUSETTS Right-to-Know - The following components of this material are included in the Massachusetts Substance List and are present at or above reportable levels:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Benzene	71-43-2	200 ppm
Benzyl chloride	100-44-7	100 ppm
N-Nitrosodimethylamine	62-75-9	1 ppm
Propylene oxide	75-56-9	10 ppm

AS A REPRODUCTIVE HAZARD

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Ethyl alcohol	64-17-5	10 %

MICHIGAN Critical Materials - The following components of this material are included in the Michigan Critical Materials List:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

NEW JERSEY Right-to-Know - The following components of this material are included in the New Jersey Hazardous Substance List and are present at or above reportable levels:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	40 %
Quaternary ammonium compounds, C12-18-alkyl[(ethylphenyl)methyl]dimethyl, chlorides	85409-23-0	40 %
Ethyl alcohol	64-17-5	10 %

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***** X - MISCELLANEOUS AND REGULATORY INFORMATION (continued) *****

PENNSYLVANIA Right-to-Know - The following components of this material are included in the Pennsylvania Hazardous Substance List and are present at or above reportable levels:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Benzene	71-43-2	200 ppm
Ehyl alcohol	64-17-5	10 %