

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: LONZA BAROUAT MB 50 440# DATE: 03/07/86 PAGE 01  
PRODUCT CODE: 15-21165-01

CAS # 000139-08-2

FORMULA: C(21)-(27)H(38)-(46)ClN

CHEMICAL FAMILY: N/A

CHEMICAL NAME AND SYNONYMS: Benzalkonium Chloride; 17% concentrate  
Quarternary Ammonium Compound

MANUFACTURERS NAME: Lonza Inc.

SUPPLIERS NAME: Thompson-Hayward Chemical Company  
5200 Speaker Rd

SUPPLIERS PHONE NUMBER: 913-321-3131 Ks 66106  
TRANSPROTATION EMERGENCY PHONE NUMBER: 1-800-424-9300

SECTION I Hazardous Ingredients

Ingredient	Percent	TLV
Quaternary Ethanol	50.0	N/A
	9.5	1000 ppm ACGIH
Methanol	0.5	200 ppm skin ACGIH

SECTION II Health Hazards

Threshold Limit Value: Acute oral LD(50): 894 mg/kg (rat)

Effects of Overexposure:

Eyes: Moderate to severe irritant. Direct contact can cause severe eye damage. Corrosive,

Skin: Moderate to severe irritant. Repeated contact can cause severe irritation.

Inhalation: Solvent vapors or mists of products can cause irritation of mucous membranes.

Ingestion: Immediate burning pain in the mouth, throat, abdomen and severe swelling of the larynx, skeletal muscle paralysis affecting the ability to breathe, circulatory shock, convulsions; may be fatal.

First aid:

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart to ensure flushing of the entire eye surface. Call a physician.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before reuse.

Inhalation: UNK

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SECTION II Health Hazards

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Ingestion: If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solutions; or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

Other Information: NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock as well as oxygen and measures to support breathing manually or mechanically may be needed. If persistent, convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

SECTION III Special Protection Information

Respiratory Protection: Not required if good ventilation is maintained, otherwise wear suitable MSHA/NIOSH approved respirator where vapor concentrations are encountered.

Ventilation Required: Explosion-proof exhaust ventilation at point of contaminant release.

Protective Clothing:

Eyes: Splash-proof safety goggles

Skin: Impervious gloves

Additional Protective Measures: Impervious apron, eyewash facility, emergency shower

SECTION IV Fire & Explosion Hazard Data

Flash Point (Method): 105 F

Auto Ignition Temperature: 689 F

Flammable Limits (% Volume in Air):

Upper: 19.0

Lower: 3.3

Extinguishing Media: Alcohol foam carbon dioxide, dry chemical, water  
log

Special Fire Fighting Procedures: Must wear MSHA/NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water spray.

Unusual Fire and Explosion Hazards: Products of combustion are toxic. Heated solvent vapors can travel to an ignition source and flash back. Explosive mixtures can form with air.

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PRODUCT NAME: LONZA BARQUAT MB 50 4404      DATE: 03/07/86 PAGE 03  
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SECTION V Physical Data

Boiling Point: 173-212 F  
Melting or Freezing Point: 15 F (pour point)  
Specific Gravity (H<sub>2</sub>O=1): 0.960  
Vapor Pressure (MM HG.): 44 @ 68 F  
Vapor Density (AIR=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility in Water: Soluble  
Percent Volatile by Volume: 50.0  
Viscosity: <100 cps @ 25 C  
pH: N/A  
Appearance and Odor: Pale yellow liquid; mild amine odor

SECTION VI Reactivity Data

Stability: Stable  
Incompatibility: Strong oxidizing or reducing agents. Admixtures can be explosive.  
Hazardous Decomposition Products: Oxides of carbon and nitrogen. Highly toxic hydrogen chloride fumes.  
Hazardous Polymerization: UNK

SECTION VII Spill and Leak Procedures

Steps to be taken if material is released or spilled: Remove all sources of ignition. Wear MSHA/NIOSH approved respirator. Self-contained breathing apparatus preferred. Dike and contain spill with inert material (sand, earth etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water. CAUTION! Floors may become slippery.

Waste Disposal Method: Incinerate. Make sure all federal, state and local regulations are observed.

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KANSAS CITY, KANSAS

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SECTION VIII D.O.T. Shipping Information

Proper Shipping Name: NONE  
Hazard Class: NONE  
ID Number: NONE  
Label Requirements: NONE  
Other Information:

SECTION IX Additional Information

This information may be of importance to you:

Storage and Labeling:

Storage Temp. Indoor Heated Refrigerated Outdoor  
Max. 140 F min. Yes No No Yes

Note: Store containers in approved areas (ventilated). Ground all containers prior to pouring. Exposure to high vapor concentration can occur when transferring material from container to container.

Health - 3  
Reactivity - 0  
Fire - 2

MANUFACTURER'S NAME:  
Lonza Inc.

ADDRESS:  
22-10 Rt. 208  
Fair Lawn, NJ 07410

TELEPHONE:  
800-526-7850 (9 a.m.-5 p.m.)  
309-697-5400 (after 5 p.m.)

EMERGENCY TELEPHONE:  
800-424-9300 (Chemtrec)

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\*\*\*\*\* END OF REPORT \*\*\*\*\*

NAME: EDWARD E. CHAPMAN

DATE ISSUED: 01/06/1986  
DATE REVISED: 12/30/1985

< = LESS THAN  
> = MORE THAN

N/A = NOT APPLICABLE  
N/D = NOT DETERMINED  
N/E = NOT ESTABLISHED

UNK = UNKNOWN

The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Thompson-Hayward Chemical Co. provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration and investigation. You should satisfy yourself that you have all current data relevant to your particular use.

*Benz. Ethoxide*

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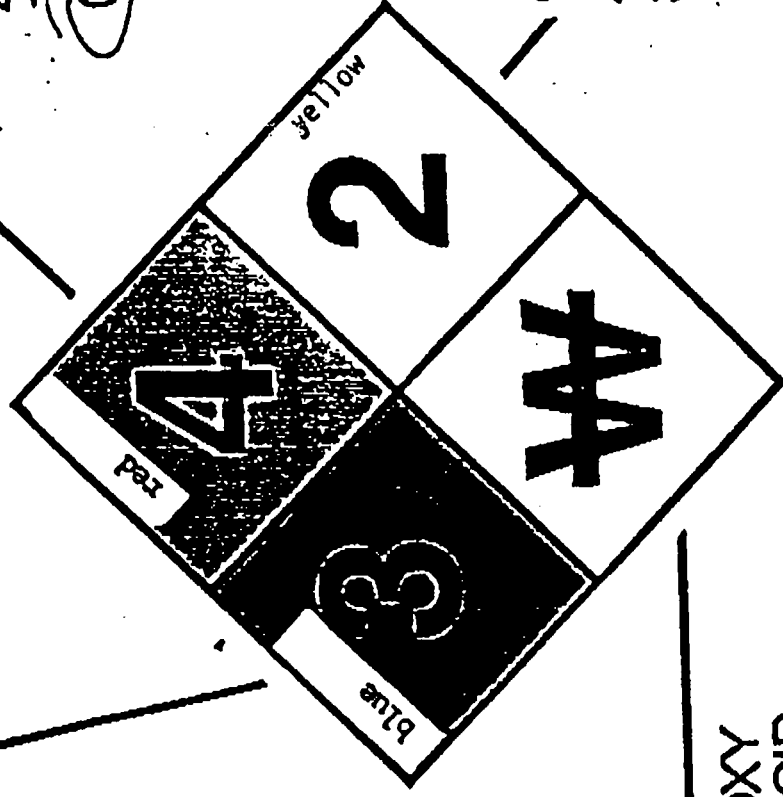
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**FIRE HAZARD**

- Flash Points
- 4—Below 73°F
  - 3—Below 100°F
  - 2—Below 200°F
  - 1—Above 200°F
  - 0—Will not burn

**REACTIVITY**

- 4—May detonate
- 3—Shock and heat may detonate
- 2—Violent chemical change
- 1—Unstable if heated
- 0—Stable



**HEALTH HAZARD**

- 4—Deadly
- 3—Extreme danger
- 2—Hazardous
- 1—Slightly hazardous
- 0—Normal material

**SPECIFIC HAZARD**

- Oxidizer
- Acid
- Alkali
- Corrosive
- Use No WATER
- Radiation Hazard

OXY  
ACID  
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W

NFPA 704  
 IDENTIFICATION OF THE FIRE  
 HAZARDS OF MATERIALS (1985)

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ADHESIVE-BACKED PLASTIC  
 BACKGROUND PIECES-ONE  
 NEEDED FOR EACH NUMERAL,  
 THREE NEEDED FOR EACH  
 COMPLETE SIGNAL.



FIG. 1. For Use Where Specified Color Background is Used with Numerals of Contrasting Colors.

FLAMMABILITY  
 SIGNAL- RED

HEALTH  
 SIGNAL-  
 BLUE

REACTIVITY  
 SIGNAL-  
 YELLOW

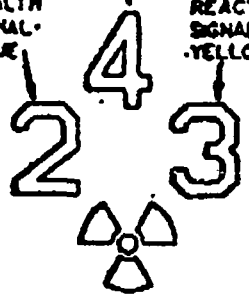


FIG. 2. For Use Where White Background is Necessary.

WHITE PAINTED BACKGROUND, OR,  
 WHITE PAPER OR CARD STOCK



FIG. 3. For Use Where White Background is Used With Painted Numerals, or, For Use Where Signal is in the Form of Sign or Placard

Identification of Health Hazard Color Code: BLUE		Identification of Flammability Color Code: RED		Identification of Reactivity (Stability) Color Code: YELLOW	
Signal	Type of Possible Injury	Signal	Susceptibility of Materials to Burning	Signal	Susceptibility to Release of Energy
4	Materials which on very short exposure could cause death or major residual injury even though prompt medical treatment were given.	4	Materials which will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature, or which are readily dispersed in air and which will burn readily.	4	Materials which in themselves are readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures.
3	Materials which on short exposure could cause serious temporary or residual injury even though prompt medical treatment were given.	3	Liquids and solids that can be ignited under almost all ambient temperature conditions.	3	Materials which in themselves are capable of detonation or explosive reaction but require a strong initiating source or which must be heated under confinement before initiation or which react explosively with water.
2	Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given.	2	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.	2	Materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. Also materials which may react violently with water or which may form potentially explosive mixtures with water.
1	Materials which on exposure would cause irritation but only minor residual injury even if no treatment is given.	1	Materials that must be preheated before ignition can occur.	1	Materials which in themselves are normally stable, but which can become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.
0	Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.	0	Materials that will not burn.	0	Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.