



SAFETY DATA SHEET

Issue Date 03-August-1999

Revision Date 18-August-2020

Version 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name BTEAC

Other Means of Identification

SDS # LC-005

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Catalyst

Details of the Supplier of the Safety Data Sheet

Supplier Address

Lindau Chemicals, Inc.
731 Rosewood Drive
Columbia, SC 29201

Emergency Telephone Number

Company Phone Number

Phone: 1-803-799-6863

Fax: 1-803-256-3639

Emergency Telephone

INFOTRAC 01-352-323-3500 (International)

1-800-457-4280 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific Target Organ Toxicity (Single Exposure)	Category 3

Signal Word

Warning

Hazard Statements

H315: Causes skin irritation

H319: Causes serious eye irritation

H335: May cause respiratory irritation



Appearance White/off-white crystalline powder

Physical State Powder

Odor Slight characteristic odor

Precautionary Statements - Prevention

P261: Avoid breathing dust.
 P264: Wash face, hands and any exposed skin thoroughly after handling.
 P271: Use only outdoors or in a well-ventilated place.
 P280: Wear protective gloves, protective clothing and eye protection.

Precautionary Statements - Response

P305 + P351: IF IN EYES: Rinse cautiously with water for several minutes.
 P338: Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313: If eye irritation persists: Get medical advice/attention.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
 P332 + P313: If skin irritation occurs: Get medical advice/attention.
 P362 + P364: Take off contaminated clothing and wash it before reuse.

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
 P405: Store locked up.

Precautionary Statements - Disposal

P501: Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms N,N,N-triethylbenzenemethanaminium chloride
Formula C₁₃H₂₂CIN

Chemical Name	CAS No	Weight-%
Benzyltriethylammonium chloride	56-37-1	100

4. FIRST AID MEASURES

First Aid Measures

Inhalation	If dust is inhaled, go to a fresh air location and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation occurs and persists: Get medical advice/attention.
Ingestion	If individual is conscious and alert, induce vomiting. Seek medical attention.
Skin Contact	If on skin, wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Remove and wash contaminated clothing before reuse.

Most Important Symptoms and Effects

Symptoms May irritate skin, eyes or respiratory system if exposure occurs.

Indication of any Immediate Medical Attention and Special Treatment Needed (if Necessary)

Note to Physician Treat symptomatically.

See Toxicological Information (Section 11)

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Media Use CO₂, foam, or water spray (fog).

Unsuitable Media Not determined

Specific Hazards Arising from the Chemical

Product may support combustion if exposed to fire. Combustion products may be toxic.

Hazardous Combustion Products Carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen chloride, uncombusted organics

Special Protective Equipment for Fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13, Disposal Considerations, for additional information.

Methods and Materials for Containment and Cleaning Up

Contain spill, isolate the hazard area and provide ventilation. Sweep up and shovel into suitable containers for disposal while avoiding the generation of dust. Dilute and wash remaining product with water and dispose of in accordance with federal, state and local regulations. Avoid releasing product and wash water to the environment.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid generation of and breathing of dust. Use only outdoors or in a well-ventilated area.

General Occupational Hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage (Including any Incompatibilities)

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Avoid excessive temperatures and humidity. Product is hygroscopic.

Incompatible Materials Strong oxidizing agents, strong acids, strong bases, reactive metals, water

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Control Parameters

Engineering Controls Ensure adequate ventilation, especially in confined areas. Use mechanical ventilation. Eyewash stations and showers should be operational and accessible.

Individual Protection Measures

Eye/Face Protection Chemical anti-splash safety goggles or safety glasses

Skin and Body Protection Rubber, neoprene or other impervious gloves are recommended to prevent skin contact.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Powder	Odor	Slight characteristic odor
Appearance	Crystalline powder	Odor Threshold	Not determined
Color	White to off-white		

<u>Property</u>	<u>Values</u>	<u>Remarks/Method</u>
pH	5.5 – 7.0	(10% aqueous solution)
Melting Point	Ca 185 °C (decomposes)	
Boiling Point/Condensation point	> 135 °C (> 275 °F)	ASTM D-86
Flash Point	> 135 °C (> 275 °F)	Tag closed cup
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Not applicable	
Upper Flammability Limit	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not applicable	
Vapor Density	Not applicable	
Specific Gravity	0.50 – 0.65	
Water Solubility	71.1% w/w	(at 20 °C +/- 0.5 °C)
Solubility in Other Solvents	Not determined	
Partition Coefficient (n-Octanol/Water)	0.0336	(at 25 °C +/- 1 °C)
Auto-ignition Temperature	300 °C	
Decomposition Temperature	No data available	
Kinematic Viscosity	Not applicable	
Dynamic Viscosity	Not applicable	
Explosive Properties	None	
Other information	BTEAC is a hygroscopic solid.	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions

Chemical Stability

Stable under recommended storage conditions. Material becomes unstable at temperatures exceeding 135°C (275°F). Material is hygroscopic. Avoid exposing material to water or moisture.

Possibility of Hazardous Reactions

None under normal processing

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Avoid generation of dust, high temperatures, moisture and incompatible materials.

Incompatible materials

Strong oxidizing agents, strong acids, strong bases, reactive metals, water

Hazardous Decomposition Products

Benzyl chloride, triethylamine, hydrogen chloride

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation Inhalation of dust may cause respiratory irritation.

Eye Contact Causes serious eye irritation

Ingestion May be harmful if swallowed

Skin Contact Causes skin irritation

Information on Acute Toxicological Effects

Chemical Name	Oral LD50	Dermal LD50
Benzyltriethylammonium chloride 56-37-1	2244 mg/kg (Rat)	> 2000 mg/kg (Rat)

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see Section 4 of this SDS for symptoms.

Delayed and Immediate Effects and also Chronic Effects from Short-term and Long-term Exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC, ACGIH or NTP.

STOT – Single Exposure May cause respiratory irritation upon exposure. Skin or eye irritation can occur.

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Chemical Name	Fish LC50	Algae EC50
Benzyltriethylammonium chloride 56-37-1	Danio rerio 100 mg/L 96 h (static)	Desmodesmus subspicatus > 100 mg/L 72 h (static)

Persistence/Degradability

Not determined

Bioaccumulation

Chemical Name	Partition Coefficient
Benzyltriethylammonium chloride 56-37-1	0.0336

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Regulatory Entity

DOT	Not regulated
IATA	Not regulated
IMDG	Not regulated
RID	Not regulated

Note

Please see current shipping paper for most up-to-date shipping information, including exemptions and special circumstances.

15. REGULATORY INFORMATION

International Inventories

Listed TSCA, DSL/NDSL, EINECS/ELINCS, ENCS, IECSC, KECI, PICCS, TCSI, AICS, NZIoC

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECI - Korea Existing Chemicals Inventory

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substance Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

United States Federal Regulations

CERCLA This material does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 302 No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA This product does not contain any chemicals with known CAS numbers that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-know Act of 1986 (40 CFR 372).

United States State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

United States Right-to-know Regulations

Chemical Name	CAS Number	New Jersey	Pennsylvania
Benzyltriethylammonium chloride	56-37-1	X	X

16. OTHER INFORMATION

NEPA	Health Hazards 2	Flammability 1	Instability 0	Special Hazards Not determined
HMIS	Health Hazards 2	Flammability 1	Physical Hazards 1	Personal Protection Not determined

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet