

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name	BELLACIDE 355
Chemical Name	Aqueous solution of tributyl tetradecyl phosphonium chloride.
Identification No.	n/a
Identified uses	Industrial Water Treatment
Supplier	Continental Research Corporation. P.O. Box 15204 St. Louis MO 63110 T: 800-325-4869
Emergency Telephone	888-255-3924 (CHEM-TEL)

2. HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW

EPA SIGNAL WORD: DANGER. EPA REGISTRATION No. 83451-16

Appearance	Liquid
Color	Colourless.
Odor	Slight odor.
GHS Pictogram	



Signal Word	Danger	
Hazard Statements	H314	Causes severe skin burns and eye damage.
	H330	Fatal if inhaled.
	H411	Toxic to aquatic life with long lasting effects.
Contains		
GHS Classification	Physical and Chemical Hazards	Not classified.
	Human health	Acute Tox. 2 - H330; Skin Corr. 1B - H314
	Environment	Aquatic Chronic 2 - H411

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

WHMIS Label



Materials Causing Immediate Corrosive Material.
and Serious Toxic Effect.

Controlled Product Classification

Canadian WHMIS Classification D1A E

Inhalation

Toxic by inhalation. LC50 0.9 mg/L. Administered as a liquid aerosol for a single 4h nose only exposure to rats.

Ingestion

Causes burns. May cause stomach pain or vomiting.

Skin Contact

Causes burns. Not a skin sensitizer.

Eye Contact

Causes burns.

Health Warnings

This substance is corrosive.

Route Of Entry

Skin and/or eye contact. Ingestion. Inhalation.

Target Organs

Eyes Skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

5-10%

CAS No.: 81741-28-8

EC No.: 279-808-2

GHS Classification

Acute Tox. 4 - H302; Acute Tox. 2 - H330; Skin Corr. 1B - H314; Aquatic Acute 1 - H400; Aquatic Chronic 1 - H410

Composition Comments

Aqueous solution of tributyltetradecylphosphonium chloride.

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.

Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin Contact

Remove victim immediately from source of exposure. Immediately remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Get medical attention if any discomfort continues.

Eye Contact

Remove victim immediately from source of exposure. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention promptly if symptoms occur after washing.

Most important symptoms and effects, both acute and delayed

Inhalation

Severe irritation in nose and throat. Congestion of the lungs may occur producing severe shortness of breath.

Ingestion

May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin Contact

Chemical burns.

Eye Contact

May cause blurred vision and serious eye damage.

Indication of any immediate medical attention and special treatment needed

Notes To The Physician

Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Auto Ignition Temperature (°C)

Not available.

Flammability Limit - Lower(%)

Not applicable.

Flammability Limit - Upper(%)

Not applicable.

Flash point (°C)

Not available.

Extinguishing Media

This product is not flammable. Use: Carbon dioxide (CO₂). Foam. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

Specific Hazards

Fire creates: Toxic gases/vapors/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Oxides of: Phosphorus. Chlorine.

Special Fire Fighting Procedures

Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Keep run-off water out of sewers and water sources. Dike for water control.

Protective Equipment For Fire-Fighters

Leave danger zone immediately. Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Follow precautions for safe handling described in this material safety data sheet. For personal protection, see section 8.

Environmental Precautions

Avoid release to the environment. To prevent release, place container with damaged side up.

Spill Clean Up Methods

Should be prevented from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Collect and reclaim or dispose in sealed containers in licensed waste. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

Reference to other sections

For waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Avoid spilling, skin and eye contact. Avoid inhalation of vapors and spray mists. Observe good chemical hygiene practices.

Storage

Store in tightly closed original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight.

Keep separate from food, feedstuffs, fertilizers and other sensitive material. Store separated from: Alkalis. Reducing Agents.

Storage Class

Corrosive storage.

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient Comments

No exposure limits noted for ingredient(s).

Protective Equipment



Process Conditions

Provide eyewash station.

Engineering Measures

Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.

Provide adequate ventilation.

Respiratory Equipment

In case of inadequate ventilation use suitable respirator.

If exposure to spray, mist or vapours is possible wear respirator face mask with appropriate cartridge.

A respiratory protection programme that meets OSHA 1910.134 and ANZI Z88.2 requirements must be followed whenever work place conditions warrant a respirator's use.

Hand Protection

Use protective gloves made of: Selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Neoprene, nitrile, polyethylene or PVC. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Eye Protection

Wear protective eye wear (goggles or face mask). Use face shield in case of splash risk.

Hygiene Measures

Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated.

Skin Protection

When handling the product to prevent skin contact by splashing, wear a rubber apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Color	Colourless.
Odor	Slight odor.
Initial boiling point and boiling range (°C)	100 @ 760 mm Hg
Melting point (°C)	
Not available.	
Relative density	0.96 - 1.00 20°C
Vapor density (air=1)	
Not available.	
Vapor pressure	
Not available.	
Evaporation rate	
Not available.	
Evaporation Factor	
Not available.	
pH-Value, Conc. Solution	6 - 8
Decomposition temperature (°C)	>300
Odour Threshold, Lower	
Not available.	

Odour Threshold, Upper

Not available.

Flash point (°C)

Not available.

Auto Ignition Temperature (°C)

Not available.

Flammability Limit - Lower(%)

Not applicable.

Flammability Limit - Upper(%)

Not applicable.

Partition Coefficient

(N-Octanol/Water)

Not available.

Explosive properties

Scientifically unjustified.

Oxidising properties

Does not meet the criteria for oxidising.

Not available.

10. STABILITY AND REACTIVITY

Reactivity

No specific reactivity hazards associated with this product.

Stability

Stable under normal temperature conditions and recommended use.

Hazardous Polymerisation

Will not polymerise.

Conditions To Avoid

Avoid excessive heat for prolonged periods of time.

Materials To Avoid

Strong alkalis. Strong reducing agents.

Hazardous Decomposition Products

Fire creates: Toxic gases/vapors/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Oxides of: Phosphorus.

Chlorine.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Acute Toxicity (Oral LD₅₀)

> 4000 mg/kg Rat

Acute Toxicity (Dermal LD₅₀)

> 2000 mg/kg Rat

Acute Toxicity (Inhalation LC₅₀)

0.9 mg/l (vapours) Rat 4 hours

Germ cell mutagenicity:

Genotoxicity - In Vitro

Ames Test

Negative.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Acute Toxicity - Fish

Not available.

Acute Toxicity - Aquatic Invertebrates

Not available.

Acute Toxicity - Aquatic Plants

Not available.

Degradability

The product is biodegradable, but it must not be discharged into drains without permission from the authorities.

Bioaccumulative potential

The product does not contain any substances expected to be bio-accumulating.

Partition coefficient

Not available.

Mobility:

The product is miscible with water. May spread in water systems.

Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

Other adverse effects

Not available.

13. DISPOSAL CONSIDERATIONS

Waste Management

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Triple rinse drums prior to recycling or disposal.

Disposal Methods

Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point.

Liquid material should be incinerated. Material absorbed onto sand or earth should be disposed of as solid waste in accordance with local regulations. Empty packaging may contain product residues and due consideration should be given prior to disposal.

14. TRANSPORT INFORMATION

UN No. (DOT/TDG)	2922
UN No. (IMDG)	2922
UN No. (ICAO)	2922
DOT Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains tributyltetradecylphosphonium chloride), Marine Pollutant
TDG Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains tributyltetradecylphosphonium chloride), Marine Pollutant
DOT Hazard Class	
8 (6.1)	
DOT Hazard Label	
Corrosive Poison	
TDG Class	8 (6.1)
IMDG Class	8 (6.1)
ICAO Class	8
ICAO Subsidiary Risk	6.1
Transport Labels	



DOT Pack Group II
IMDG Pack Group III
Air Pack Group III
Environmentally Hazardous Substance/Marine Pollutant



EMS F-A, S-B
Classification Code (Adr) CT1

15. REGULATORY INFORMATION

Regulatory Status (US)

PROPOSITION 65: This product does not contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity and for which warnings are now required.

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. EPA REGISTRATION NUMBER 279-3139

Regulatory References

29 CFR 1910.1010 Federal Regulations (OSHA Standard).

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed.

SARA 313 Emission Reporting

None of the ingredients are listed.

CAA Accidental Release Prevention

None of the ingredients are listed.

FDA – Essential Chemical

None of the ingredients are listed.

FDA – Precursor Chemical

None of the ingredients are listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed.

Massachusetts "Right To Know" List

None of the ingredients are listed.

Rhode Island "Right To Know" List

None of the ingredients are listed.

Minnesota "Right To Know" List

None of the ingredients are listed.

New Jersey "Right To Know" List

None of the ingredients are listed.

Pennsylvania "Right To Know" List

None of the ingredients are listed.

International Inventories

EU - EINECS/ELINCS

The following ingredients are listed.

TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

Canada – DSL/NDSL

The following ingredients are listed.

TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

US - TSCA

None of the ingredients are listed.

US – TSCA 12(b) Export Notification

None of the ingredients are listed.

Australia - AICS

The following ingredients are listed.

TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

Japan – MITI

None of the ingredients are listed.

Korea - KECI

The following ingredients are listed.

TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

China - IECSC

The following ingredients are listed.

TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

Phillippines – PICCS

The following ingredients are listed.

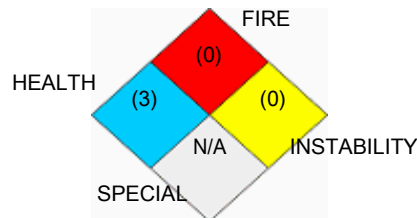
TRIBUTYLTETRADECYL PHOSPHONIUM CHLORIDE

16. OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

HEALTH	3
FLAMMABILITY	0
PHYSICAL	0
PERSONAL PROTECTION	D

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



Issued By
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EHS Administrator
20th July 2012
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Disclaimer

1. Ensure that all those within their control who use the products are supplied with all relevant information contained within the Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions and warnings contained therein.

2. Consult Supplier before using or supplying the product for any other applications. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties