

**MATERIAL SAFETY DATA SHEET****Bellacide 350****1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME** Bellacide 350  
**CHEMICAL NAME** Aqueous solution of tributyl tetradecyl phosphonium chloride  
**PRODUCT NO.** 100314  
**PRODUCT USE** Industrial Water Treatment  
**SUPPLIER** BWA Water Additives US LLC  
 1979 Lakeside Parkway  
 Suite 925, Tucker, GA30084.  
 TEL (800) 600-4523  
 CUSTOMER SERVICE  
**EMERGENCY TELEPHONE** Chemtrec Phone: 1-800-424-9300  
**IDENTIFICATION No.** 2927

**2 HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

EPA SIGNAL WORDS: POISON. DANGER.

**HUMAN HEALTH**

Corrosive. Prolonged contact causes serious eye and tissue damage.

**POTENTIAL HEALTH EFFECTS****INHALATION**

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

**INGESTION**

Harmful if swallowed.

**SKIN CONTACT**

Causes burns.

Not a skin sensitizer.

**EYE CONTACT**

Causes burns.

**HEALTH WARNINGS**

This substance is corrosive.

**3 COMPOSITION/INFORMATION ON INGREDIENTS**

Name	EC No.	CAS-No.	Weight
Tributyl tetradecyl phosphonium chloride	279-808-2	81741-28-8	48 - 52%

**EC No.** 279-808-2**CAS-No.** 81741-28-8**COMPOSITION COMMENTS**

50% Solution of tributyl tetradecyl phosphonium chloride in water

**4 FIRST-AID MEASURES****NOTES TO THE PHYSICIAN**

Probable mucosal damage may contraindicate the use of gastric lavage.

**INHALATION**

Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Get medical attention if any discomfort continues.

## Bellacide 350

### 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 immediately!

### SKIN CONTACT

Immediately remove contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

### EYE CONTACT

Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

## 5 FIRE-FIGHTING MEASURES

### EXTINGUISHING MEDIA

Use: Water spray, fog or mist. Foam, carbon dioxide or dry powder.

### 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.

### 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 (CO<sub>2</sub>). Oxides of: Phosphorus. Chlorine.

### PROTECTIVE MEASURES IN FIRE

Use self-contained breathing apparatus Leave danger zone immediately.

## 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Follow precautions for safe handling described in this 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. Product is toxic to aquatic organisms. Minimise/prevent product from entering drains or water courses

## 7 HANDLING AND STORAGE

### HANDLING

Avoid spilling, skin and eye contact. Avoid inhalation of vapors. Observe good industrial hygiene practices.

### STORAGE

Keep containers tightly closed. Keep separate from food, feedstuffs, fertilizers and other sensitive material. Store at moderate temperatures in dry, well ventilated area. Protect from light, including direct sunrays.

### STORAGE CLASS

Corrosive storage.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### INGREDIENT COMMENTS

No exposure limits noted for ingredient(s).

### PROCESS CONDITIONS

Provide eyewash station.

### PROTECTIVE EQUIPMENT



### ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation.

Provide sufficient ventilation during operations which cause vapor formation.

## Bellacide 350

### RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

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

Selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances.

It has been found that gloves made from rubber, neoprene or PVC provide short-term splash protection.

Gloves should be replaced immediately if signs of degradation are observed.

### EYE PROTECTION

Wear protective eye wear (goggles or face mask).

Use face shield in case of splash risk.

### OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

### HYGIENE MEASURES

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

### SKIN PROTECTION

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

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b>	Liquid		
<b>COLOR</b>	Colorless		
<b>ODOR</b>	Slight odor		
<b>SOLUBILITY</b>	Miscible with water.		
<b>BOILING POINT (°C)</b>	100 - 101	<b>RELATIVE DENSITY</b>	0.95 - 1.00 @ 20 °C
<b>pH-VALUE, CONC. SOLUTION</b>	6-8	<b>VISCOSITY</b>	55 - 65 cSt @ 20 °C

## 10 STABILITY AND REACTIVITY

### STABILITY

Stable under normal temperature conditions and recommended use.

### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Chlorine. Oxides of: Phosphorus.

## 11 TOXICOLOGICAL INFORMATION

**TOXIC DOSE 1 - LD 50** 1002 mg/kg (oral rat)

**TOXIC DOSE 2 - LD 50** 4000 mg/kg (ipr-rat)

### TOXICOLOGICAL INFORMATION

Ames Test negative

### INHALATION

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

### INGESTION

Harmful if swallowed.

### SKIN CONTACT

Causes burns. Not a skin sensitizer.

### EYE CONTACT

Causes burns.

### HEALTH WARNINGS

This substance is corrosive.

## 12 ECOLOGICAL INFORMATION

**LC 50, 96 hrs, Fish mg/l** 0.46 mg/l Rainbow Trout; 0.06 mg/l Bluegill; 1.6 mg/l Brown Shrimp

**EC 50, 48 hrs, Daphnia, mg/l** 0.025 mg/l

## 13 DISPOSAL CONSIDERATIONS

## Bellacide 350

### 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, dispose in licensed hazardous waste.

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



<b>TDG SHIPPING NAME</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (contains tributyl tetradecyl phosphonium chloride)		
<b>DOT PROPER SHIPPING NAME</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (contains tributyl tetradecyl phosphonium chloride)		
<b>TDG SHIPPING NAME</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (contains tributyl tetradecyl phosphonium chloride)		
<b>IDENTIFICATION No.</b>	2927	<b>DOT HAZARD CLASS</b>	6.1 (8)
<b>DOT PACKING GROUP</b>	II	<b>U.S DOT HAZARD LABEL</b>	Poison Corrosive
<b>UN NO. AIR</b>	2927	<b>AIR CLASS</b>	6.1 (8)
<b>AIR PACK GR.</b>	II	<b>DOT PACKING GROUP</b>	II

## 15 REGULATORY INFORMATION

### INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
Tributyl tetradecyl phosphonium chloride	DSL	Yes	EINECS	Yes	Exemp	Yes	Yes	Yes

COMPONENT	CAS	CA	FL	MA	MN	NJ	PA	RI
Tributyl tetradecyl phosphonium chloride	81741-28-8	No	No	No	No	No	No	No

### REGULATORY STATUS (US)

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. 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. EPA REGISTRATION NUMBER:83451-15

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

### LABEL(S) FOR SUPPLY



Materials  
Causing  
Immediate and  
Serious Toxic  
Effect.



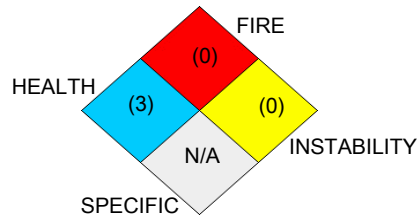
Corrosive  
Material.

### CONTROLLED PRODUCT CLASSIFICATION

Canadian WHMIS Classification D1A E

**Bellacide 350****16 OTHER INFORMATION****HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)**

HEALTH	3
FLAMMABILITY	0
PHYSICAL	0
PERSONAL PROTECTION	D

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)****REVISION COMMENTS**

NOTE: Lines within the margin indicate significant changes from the previous revision.

Section 14 Transport classification; Packing Group II was assigned based on the result obtained from an inhalation study with a 4h exposure, extrapolated to 1h per 49 CFR §173.132 (b)(3)(i). Final result >0.2 mg/L, but <2.0 mg/L.

**ISSUED BY**

G.B.

**REVISION DATE** 6th March 2009

**VERSION No.** 6

**SAFETY DATA SHEET STATUS**

Approved.

**DATE** 6th March 2009.

**DISCLAIMER**

For safety reasons it is IMPERATIVE that customers:-

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 BWA Water Additives 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.