



# SAFETY DATA SHEET

REVISION: A  
REVISION DATE: 01 JUNE 2015  
SUPERCEDES: 28 JAN 2010

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## 1. Product and Company Information

Product Name; AF24173 ANTI-FOULANT DEVICE  
Product Number: 801542.1  
Product Usage: For use only in Sea-Bird Electronics conductivity sensors to control the growth of aquatic organisms within electronic conductivity sensors

### ACTIVE INGREDIENT:

Bis(tributyltin) oxide..... 53.0%  
OTHER INGREDIENTS: ..... 47.0%  
Total..... 100.0%

EPA Registration No. 74489-1  
EPA Establishment No. 74489-WA-1

Company Name: Seabird Electronics, Inc.  
Address: 13431 NE 20<sup>TH</sup> Street  
Bellevue, Washington, 98005

Phone Number; (425) 643-9866  
Fax: (425) 643-9954  
Website: <http://www.seabird.com>  
E-Mail: [seabird@seabird.com](mailto:seabird@seabird.com)

Emergency Phone Number: 1-800-858-7378 daily, 8:00 AM – 12:00 PM Pacific Time

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## 2. Hazard(s) Identification

### Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Dermal (Category 3), H311  
Skin irritation (Category 2), H315  
Specific target organ toxicity - repeated exposure (Category 1), H372  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410  
For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS Label elements, including precautionary statements

Pictogram



Signal word: **Danger**

**Hazard statement(s)**

H301 + H311 Toxic if swallowed or in contact with skin

H315 Causes skin irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effect

**Precautionary statement(s)**

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ protective clothing.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P314 Get medical advice/ attention if you feel unwell.

P322 Specific measures (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P361 Remove/ Take off immediately all contaminated clothing.

P405 Store locked up.

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

**Hazards not otherwise classified (HNOC) or not covered by GHS – none**

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**3. Composition / Information on Ingredients****Substances**

Synonyms : Bis[tri-n-butyltin(IV)]oxide  
HBD  
Tributyltin(IV) oxide  
Hexabutyldistannoxane  
TBTO

Formula :  $C_{24}H_{54}OSn_2$   
Molecular Weight : 596.10 g/mol  
CAS-No. : 56-35-9  
EC-No. : 200-268-0  
Index-No. : 050-008-00-3

**Hazardous Components**

Bis(tributyltin) oxide Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

Acute Tox. 3; Skin Irrit. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1;  
H301+H311, H315, H372, H410. (See section 16)

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#### **4. First Aid Measures**

##### **First Aid Procedures:**

**Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Obtain Medical Attention.

**Skin:** Remove contaminated clothing and shoes. Wash skin with soap and large amounts of soap and water. Obtain Medical Attention.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen. Obtain Medical Attention.

**Ingestion:** Get medical attention immediately. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person.

**Notes to Physician** Treat symptomatically

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#### **5. Firefighting Measures**

**Unusual Fire and Explosion Hazards:** None known.

##### **Fire Fighting Procedures:**

NIOSH approved positive pressure, self-contained breathing apparatus and full protective turn out gear.

Evacuate personnel to an area upwind to avoid smoke and vapors.

Remove containers of this material if it can be done safely.

Use water to keep fire-exposed containers cool.

Protective clothing and equipment must be decontaminated if contact with the material or vapors has occurred.

**Extinguishing Media:** All common extinguishing media are suitable.

**Conditions to Avoid:** Not determined.

**Hazardous Combustion Products:** May produce irritating and toxic smoke and fumes. The composition of the combustion products has not been determined.

**Flash Point:** Not determined.

**Flammability Limits:** Lower: Not determined Upper: Not determined

**Auto-ignition Temperature:** Not determined

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## 6. Accidental Release Measures

### **Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. (For personal protection see section 8)

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### **Reference to other sections**

For disposal see section 13.

### **Reporting Requirements:**

The United States Environmental Protection Agency (USEPA) has not established a Reportable Quantity (RQ) for release of this material. Report all releases which are likely to endanger the public health, harm the environment, or cause complaint to the appropriate State or Local officials

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## 7. Handling and Storage

### **General Measures:**

Store at room temperature, in airtight containers and protect from light. Keep away from heat, sparks, and flame.

### **Materials or Conditions to Avoid:**

Acids and oxidizing agents. Elevated temperatures.

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## 8. Exposure Controls / Personal Protection

### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### **Personal protective equipment**

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Recommended Exposure Limits:**

<b>Substance</b>	<b>ACGIH – TLV TWA/STEL</b>	<b>OSHA – PEL TWA/STEL</b>
Tin, Organic tin compounds, as Sn (Skin Notation)	0.1 mg/m <sup>3</sup> / 0.2 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>

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**9. Physical and Chemical Properties**

**Physical State:** Plastic cylinder (0.68 inches diameter and 0.68 inches tall).

**Color:** White

**Odor:** Slight

**Taste:** Not determined

**pH:** Not determined.

**Volatile (Wt. or Vol.), %:** Not determined.

**Moisture Content, (Wt.) %:** Not determined.

**Solubility in Water:** Not soluble.

**Solubility - other solvents:** Not determined.

**Specific Gravity/Bulk Density:** 1.02 g/cm<sup>3</sup>.

**Vapor Pressure:** Not determined.

**Vapor Density (air = 1):** Not determined.

**Evaporation Rate (butyl acetate =1):**<1

**Boiling Point:** Not determined

**Melting Point:** Not determined.

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**10. Stability and Reactivity**

**General Stability Considerations:** Stable at room temperature.

**Incompatible Materials:** Oxidizing agents and acids.

**Hazardous Decomposition:** Products: Not determined.

**Hazardous Polymerization:** Does not occur.

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## 11. Toxicological information

**Acute Toxicity:** Acute toxicological studies with the AF24173 Anti-Foulant device have not been conducted..

**Acute toxicological data for bis(tributyltin)oxide is presented below:**

Oral LD50 - rat = 123-193 mg/kg; Inhalation LC50 - 4 hour, rat = 0.06 mg/l (a saturated vapor killed some rats after one hour of exposure); Dermal LD50 - rabbits = >300 mg/kg; Eye irritation, rabbit = corrosive; Skin irritation, rabbit = corrosive (5 minute exposure, not alleviated by washing); Skin sensitization, guinea pig = positive (1% in acetone)

**Reproductive Effects:** No effects on reproductive performance or fertility or pathologic lesions were seen in male and female rats administered the bis(tributyltin)oxide at dietary levels up to 50 ppm throughout pre-mating, mating, pregnancy and nursing periods for 2 generations. Reduced body weights and food consumption were reported in the high dose group. Pup weights were reduced at the 5 ppm level and greater.

**Teratogenicity Information:** Minor ossification effects were seen in rats dosed orally during pregnancy, but only at maternally toxic doses (9 and 18 mg/kg). An increase in the incidence of birth defects (mainly cleft palate) was noted at 18 mg/kg. No developmental effects were noted in the offspring of rabbits dosed at 2.5 mg/kg during pregnancy. However at this level there was marked maternal toxicity, increase in the incidence of abortions and fetal toxicity.

**Mutagenicity/Genotoxicity Information:** Not mutagenic in standard *in vitro* tests using animal and bacterial cells.

**Carcinogenicity and Chronic:** Bis(tributyltin)oxide, at levels up to 5 mg/kg, caused no effects on the nervous system or behavior of dogs following oral administration for 1 year or in rats fed diets containing up to 50 ppm for 2 years. In the 2-year rat study there was a suppression of the immune system, signs of anemia, impaired, thyroid, liver and spleen changes, an increased incidence of benign tumors of the pituitary, adrenal and parathyroid glands. A marginal reduction in spleen iron content was seen at 5 ppm. No adverse effects were reported at 0.5 ppm. Rats dosed orally for 10 days at 25 mg/kg showed a suppression of the immune system, along with anemia and inflammation of the bile ducts and tubules

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## 12. Ecological Information

**Environmental Fate:** Alkyl organotin compounds have high bioconcentration factors (up to 10,000). The rate of hydrolysis and photolysis in aqueous environments is slow. They are absorbed to soils and sediment and do not leach through soil columns.

**Ecotoxicity:** Bis(tributyltin) oxide is highly toxic to freshwater and marine fish (96-hrLC50 = 6.9-24 ppb), freshwater and marine crustacea (48 and 96-hr LC50 = 1.7-9.1 ppb) mollusks (48 and 96-hr EC50 = 0.3-1.0 ppb) The chronic no-observed-effect concentration (NOEC) for sheephead minnow chronic and life-cycle end points was 0.42-0.96 ppb and the 28-day oyster larvae endpoint was 0.5 ppt. The chronic NOEC for the *Daphnia magna* endpoint was 80 ppt.

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## 13. Disposal Considerations

**Waste Disposal Method:** Pesticide that cannot be used according to label instructions must be disposed of according to Federal or approved State procedures under Subtitle C of the Resource Conservation and Recovery Act.

**Empty Container Disposal:** Dispose of in a sanitary landfill or by other approved State and Local procedures.

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## 14. Transport Information

**U.S. DOT:** Not regulated.

**IATA:** Not regulated.

**IMO:** Not regulated.

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## 15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide Label and Conductivity Instrument Manual - Additional Precautionary Statements and Information on the Handling, Storage, and Disposal of this Product:

**Causes irreversible eye damage and skin burns.**

**Harmful if swallowed.**

**Harmful if absorbed through skin or inhaled.**

**Prolonged or frequently repeated contact may cause allergic reactions in some individuals.**

**SARA TITLE III: Section 302. Not listed, Section 313. Not listed.**

**CERCLA Hazardous Substance: Not listed.**

**RCRA Hazardous Substance: Not listed.**

**California Prop. 65 List: Not listed.**

**Massachusetts Substance List: Tributyltin oxide is listed.**

**New Jersey Right to Know Hazardous Substance List: Tributyltin oxide is listed.**

**Pennsylvania Hazardous Substance List: Not listed.**

**Canadian WHMIS List: Not listed.**

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## **16. Other Information**

**This product is a registered pesticide (U.S. EPA). Use of this product in a manner inconsistent with the product label or instructions in the instrument manual is a violation of Federal law.**

### **LIST OF ACRONYMS:**

**ACGIH:** American Conference of Governmental Industrial Hygiene

**AIHA WEEL:** American Industrial Hygienists Association - Workplace Environmental Exposure Level

**ANSI:** American National Standards Institute

**C:** Ceiling

**California Prop. 65:** California Safe Drinking Water and Toxic Enforcement Act (Prop 65)

**Canadian WHMIS:** Canadian Workplace Hazardous Materials Information System Ingredient Disclosure

**CASRN:** Chemical Abstracts Service Registry Number

**CERCLA:** Comprehensive Emergency Response, Compensation and Liability Act

**DEA:** Drug Enforcement Administration

**DOT:** U. S. Department of Transportation

**HMIS:** Hazardous Materials Identification System

**IARC:** International Agency for Research on Cancer

**IATA:** International Air Transport Association

**IMO:** International Maritime Organization

**N/A:** Not Applicable

**NOR:** Not Otherwise Regulated

**NTP:** National Toxicology Program

**OSHA:** Occupational Safety and Health Administration

**PEL:** OSHA Permissible Exposure Limit

**RCRA:** Resource Conservation and Recovery Act

**RQ:** Reportable Quantity

**SARA:** Superfund Amendment Reauthorization Act

**STEL:** Short-Term Exposure Limit

**TLV:** Threshold Limit Values (registered trademark of ACGIH)



**TPQ:** Threshold Planning Quantity  
**TSCA:** Toxic Substances Control Act  
**TWA:** Time Weighted Average

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*The information and recommendations contained in this Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. No warranty, guaranty, or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.*