

# MATERIAL SAFETY DATA SHEET

## HMIS RATINGS

Health Hazard: 1  
Flammability Hazard: 0  
Reactivity Hazard: 0

Willert Product No. R-47 and R-48

Issue Date: 5/7/2010

Supersedes: 6/4/2006

**Product Name: Enoz Roach Away Boric Acid (EPA Reg. No. 1475-20201)**

(The information provided in this Material Safety Data Sheet is directed at occupational exposure and may not be applicable to consumer use of the product.)

**Willert Home Products, Inc.**  
**4044 Park St.**  
**St. Louis, MO 63110**

**EMERGENCY TELEPHONE NUMBER:** 314-772-2822 (8:30 AM to 4:30 PM CST)  
CHEMTREC 800-424-9300

## SECTION 2: COMPONENT INFORMATION

Ingredients	CAS Number	Concentration in Product
Boric acid	10043-35-3	99%

## SECTION 3: HAZARDS IDENTIFICATION

### Emergency Overview:

White odorless powder, in a white plastic bottle. Harmful if swallowed or absorbed through the skin. Dust can cause eye and respiratory tract irritation.

### Potential Health Effects:

**Relevant Routes Of Exposure:** Inhalation, Ingestion, Eye Contact, Skin Contact.

### Acute Effects:

**Ingestion:** May be harmful or fatal if swallowed. Can cause nausea, vomiting, central nervous system effects (tremors, headache, convulsions followed by weakness and coma). Following GI symptoms, patient may exhibit a characteristic intense generalized erythodema (boiled lobster appearance).

**Eyes:** Dust may cause eyes irritation.

**Inhalation:** Dust can cause respiratory tract irritation.

**Skin:** Repeated or prolonged could cause skin irritation. Boric acid can be absorbed through the skin and cause systemic toxicity.

**Carcinogenicity:** Not listed by NTP, OSHA and IARC.

**Reproductive Effects:** Chronic occupational exposure has caused reduced sperm counts.

**Target Organs:** Ocular, respiratory, dermal, central nervous system, and gastrointestinal.

**Medical Conditions Aggravated By Exposure:** None known.

## **SECTION 4: FIRST AID PROCEDURES**

### **First Aid Procedures:**

**EYES:** Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Remove contact lenses, if present, after the first five minutes and continue rinsing the eye. Call a physician or poison control center immediately.

**SKIN:** Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. If irritation occurs, get medical attention.

**INHALATION:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**INGESTION:** Do not give anything by mouth to an unconscious person. Call poison control center or doctor immediately for treatment advice. Have person rinse the mouth with water. If able to swallow, have the person sip a glass of water. Do not induce vomiting unless told to do so by a poison control center or doctor.

## **SECTION 5: FIRE HAZARDS**

**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:** Contact with water, acids and reducing agents.

**Hazardous Combustion Products:** May produce irritating and toxic smoke and fumes.

**Flash Point:** Not applicable.

**Flammability Limits:** Lower: Not applicable.

Upper: Not applicable.

**Autoignition Temperature:** Not applicable.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Pre-Entry Spill Procedure:**

Shut off source of spill if it is safe to do so.

Review Section 3 - Hazards Identification and Section 8- Exposure Control/Personal Protection before proceeding with the clean up.

### **Clean Up and Containment:**

Scoop or shovel spilled material into suitable labeled containers with a tight fitting lid.

Secure the drum cover and move the container to a safe holding area.

Check area for residual material and repeat clean up if detected.

**Environmental Concerns:** None known.

### **Treatment and Disposal:**

Decontaminate or dispose of all protective clothing and equipment.

See Section 13 - Disposal Recommendations for disposal information.

### **Reporting Requirements:**

Report all releases which are likely to endanger the public health, harm the environment, or cause complaint to the appropriate State or Local officials.

## **SECTION 7: HANDLING AND STORAGE**

### **General Measures:**

Store in a dry area at room temperature.

Do not generate dust.

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

Contact with water, acids, and reducing agents.

Moisture and high humidity conditions.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **General Hygienic Practices:**

Do not get on eyes, skin, or clothing.

Do not breathe dust or fumes.

Wash thoroughly after handling.

**Eyewear:** Chemical goggles.

**Skin:** Gloves are recommended if there is a potential for skin contact. A plastic or rubber glove which provides a physical barrier to the powder is required. Use disposable spun polyolefin (e.g. Tyvek) coveralls or equivalent to protect against contact. Consult the glove and clothing manufacturers, suppliers and/or industrial hygienist for further information.

**Respiratory Protection:** Respiratory protection is required whenever air contamination (dust, mist, or vapors) is generated by the process. A NIOSH approved high efficiency toxic dust/mist/fume respirator is recommended.

**Work Practices and Engineering Controls:**

General room ventilation is adequate unless the process generates dust or fumes.

Prevent the accumulation of dust in the work area by thorough periodic cleaning of the area.

**Protective Measures During Repair and Maintenance:** No special measures are required.

Follow the recommendation for personal protective equipment.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**The following information pertains to boric acid.**

**Appearance:** White powder

**Odor:** Odorless.

**Taste:** Not determined.

**pH:** Not determined.

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

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

**Solubility in Water:** 4.7% at 20<sup>0</sup> C.

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

**Specific Gravity/Bulk Density:** Not determined.

**Vapor Pressure:** Negligible at 20<sup>0</sup> C.

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

**Evaporation Rate:** < butyl acetate

**Boiling Point:** Not determined

**Melting Point:** 171<sup>0</sup> C.

## **SECTION 10: STABILITY AND REACTIVITY**

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

**Incompatible Materials:** Oxidizing agents, metals, bases, and water.

**Hazardous Decomposition Products:** Not determined.

**Hazardous Polymerization:** Does not occur.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Boric Acid: Acute Toxicity:** Oral – human adult  $LDL_0$  = 200 to 429 mg/kg Oral – human infant  $LDL_0$  = 934 mg/kg; Oral – rat  $LD_{50}$  = 1330-2660 mg/kg; Oral – mouse  $LD_{50}$  = 1780-3450 mg/kg Oral - dog  $LDL_0$  = 1780 mg/kg; Oral - rabbit  $LDL_0$  = 4000 mg/kg; Oral – guinea pig  $LDL_{050}$  = 1000 mg/kg; Inhalation - rat 4 hours  $LCL_0$  = 28 mg/m<sup>3</sup>; Dermal – human infant  $LDL_0$  = 1200 to 1500 mg/kg; Dermal – human adult  $LDL_0$  = 2430 mg/kg .

**Reproductive/Teratogenicity Effects:** Boric acid has caused fetal toxicity and developmental abnormalities in studies with rats, mice and rabbits. Chronic feeding studies at 1170 ppm boric acid, reported sterility in the rats and testicular degeneration in rats and dogs.

**Mutagenicity/Genotoxicity Information:** Boric acid: Chinese hamster ovary cell assay with and without activation –negative; Mouse lymphoma cell assay with and without activation-negative; Ames test (Salmonella typhimurium) – negative: Unscheduled DNA rat hepatocytes – positive.

**Carcinogenicity and Chronic Toxicity:** Two-year oral dosing studies with boric acid in rats and mice did not report evidence of carcinogenicity.

## SECTION 12: ECOLOGICAL INFORMATION

**Environmental Fate: Boric acid:** log P (octanol-water) -0.220.

**Ecotoxicity: Boric acid:** Rainbow trout *Oncorhynchus mykiss*) 96 hour  $LC_{50}$  = 100 ppm; Channel catfish (*Ictalurus punctatus*) 5 day (flow through)  $LC_{50}$  = 1.26 g/L; Channel catfish (*Ictalurus punctatus*) 9 day (flow through)  $LC_{50}$  = 0.89 g/L; *Daphnia magna* 48 (static) hour  $LC_{50}$  = 133 mg/L.

Mallard duck – Dietary 8 days  $LD_{50}$  = >5620 ppm; Honey bee (*Apis mellifera*) topical, 48 hour  $LD_{50}$  = >363.58 ug/bee

## SECTION 13: DISPOSAL RECOMMENDATIONS

**Waste Disposal Method:** Dispose of material and containers in accordance with all applicable federal, state, and local environmental regulations.

## SECTION 14: TRANSPORTATION INFORMATION

Not regulated.

## SECTION 15: REGULATORY INFORMATION

**California Proposition 65 List:** None of the ingredients are listed.

## SECTION 16: OTHER INFORMATION

None

## 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  
**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 Material 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 MSDS 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.