



**Wood Treatment Products, Inc.**  
P.O. Box 950445 • Lake Mary, FL 32795-0445  
Tel: 407.330.0177 • Fax: 407.330.3243 • Toll Free: 800.345.8102  
www.eswoodtreatment.com

# Material Safety Data Sheet

(August 23, 2005)

Wood Treatment Products, Inc. - EPA # 79628-1

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATIONS

Product Name: .....BoraSol-WP  
Chemical Formula:..... $\text{Na}_2\text{B}_8\text{O}_{13} / 4\text{H}_2\text{O}$   
Chemical Names/Synonyms:  
.....Disodium Octaborate Tetrahydrate  
Chemical Family:.....Inorganic Borates  
CAS. Registry Number: .....12280-03-4  
TSCA.: .....12008-41-2  
EPA Pesticide Registration Number: .....79628-1

**Distributor of  
Disodium Octaborate Tetrahydrate**

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**Emergency Phone Numbers (24 Hour Service)**

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## 2. HAZARD IDENTIFICATION

**OVERVIEW:**

BoraSol is a white odorless, powdered substance that is not flammable, combustible or explosive and it presents no unusual hazard if involved in a fire. BoraSol presents little or no hazard (to humans) and has low oral and dermal toxicities.

**POTENTIAL ECOLOGICAL EFFECTS:**

Large amounts of BoraSol can be harmful to boron-sensitive plants and other ecological systems.

**POTENTIAL HEALTH EFFECTS:**

**Routes of Exposure:** Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposures not usually a concern because BoraSol is not absorbed through intact skin.

**Inhalation:** Occasional mild irritation of nose and throat may occur from inhalation of BoraSol dusts at levels greater than 10 mg/m<sup>3</sup>.

**Ingestion:** Products containing BoraSol are not intended for ingestion. BoraSol has a relatively low acute toxicity. Small amounts (e.g. a teaspoon) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

**Eye Contact:** BoraSol is non-irritating to eyes in normal industrial use.

**Skin Contact:** BoraSol does not cause irritation to intact skin.

**Target Organs:** No target organ has been identified in humans. High dose animal ingestion studies of similar inorganic borate chemicals indicate the testes are the target organs in males animals, though human studies have not show such results.

**Signs and Symptoms of Exposure:** Symptoms of accidental over-exposure to BoraSol have been associated with ingestion or by absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling.

### 3. FIRST AID MEASURES

**Inhalation:** No specific treatment is necessary since BoraSol is not likely to be hazardous by inhalation. Prolonged exposure to dust levels in excess of regulatory limits should always be avoided.

**Eye Contact:** Use eye wash fountain or fresh water to cleanse eye. If irritation persists for more than 30 minutes, seek medical attention.

**Skin Contact:** Wash with soap and water.

**Ingestion:** Swallowing less than one teaspoon will cause no harm to healthy adults. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

**NOTICE TO PHYSICIANS:** Observation only is required for adult ingestion of less than 6 grams of BoraSol. For ingestion in excess of 6 grams of BoraSol, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Haemodialysis should be reserved for massive acute ingestion or patients with renal failure. BoraSol analysis of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment. (Further information: Litovitz T.L., Norman, S.A., Veltri, J.C., Annual Report of the American Association of Poison Control Centers Data Collection System. American Journal of Emergency Medicine 1986; 4:427-458).

### 4. FIRE-FIGHTING MEASURES

**General Hazard:** None. Because BoraSol is not flammable, combustible or explosive. The product is itself a flame retardant.

**Extinguishing Media:** Any fire extinguishing media may be used on nearby fires.

**Flammability Classification (29 CFR 1910. 1200):** Non-flammable solid.

### 5. ACCIDENTAL RELEASE MEASURES

**General:** BoraSol is a water-soluble white powder that may cause damage to trees or vegetation by root absorption.

**Land Spill:** Vacuum, shovel or sweep up BoraSol and place it in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

**Water Spill:** BoraSol will cause localized contamination of surrounding waters, depending on the quantity dissolved in these waters. At high concentrations, some damage to local vegetation, fish and other aquatic life may be expected.

BoraSol is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261).

### 6. HANDLING AND STORAGE

**Storage Temperature:** Room Temperature (72° F).

**Storage Pressure:** Atmospheric

**Storage Conditions:** Dry, indoor storage.

**Shelf Life:** Since BoraSol is an inorganic naturally occurring borate, it will not react or decompose and will last indefinitely under ideal conditions. But since high moisture and temperature conditions can cause caking, it is advised that the product be used within one year.

### 7. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use local exhaust ventilation to keep airborne concentrations of BoraSol dust below permissible exposure levels.

**Personal Protection:** Where airborne concentrations are expected to exceed exposure limits NIOSH/MSHA certified respirators must be used. Eye goggles and gloves are not required for normal industrial exposures but may be warranted if environment is excessively dusty.

#### Occupational Exposure Limits:

BoraSol is listed/regulated by OSHA, Cal OSHA and ACGIH as "Particulate Not Otherwise Classified" or "Nuisance Dust."

OSHA: PEL\* - 15 mg/m<sup>3</sup> total dust and  
5 mg/m<sup>3</sup> respirable dust

ACGIH: TLV\*\* - 10 mg/m<sup>3</sup>

Cal OSHA: PEL\* - 10 mg/m<sup>3</sup>

\* PEL = "Permissible Exposure Limit"

\*\*TLV = "Threshold Limit Value"

## 8. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	White, odorless, crystalline solid	<b>Average Bulk Density:</b>	25 pounds per cubic foot
<b>Specific Gravity:</b>	1.9	<b>pH:</b>	8.0 ( 5% solution)
<b>Solubility In Water:</b>	9.7% (20°)		7.6 (10% solution)

## 9. TOXICOLOGICAL INFORMATION

**Ingestion (Acute Oral Toxicity):** Low acute oral toxicity; LD<sub>50</sub> in rats is 2550 mg/kg of body weight.

**Skin (Acute Dermal Toxicity):** Low acute dermal toxicity; LD<sub>50</sub> in rabbits is greater than 2000 mg/kg of body weight. BoraSol is not absorbed through intact skin.

**Primary Skin Irritation Index:** 0 (Zero) BoraSol is non-corrosive.

**Eye:** Draize test in rabbits produced mild eye irritation effects.

## 10. ECOLOGICAL INFORMATION

**Phytotoxicity:** Although boron is an essential micronutrient for healthy growth of boron-sensitive plants, it can be harmful to plants in higher quantities. Care should be taken to minimize the amount of borate product released to the environment.

**Persistence/Degradation:** Boron is naturally occurring and ubiquitous in the environment.

**Soil Mobility:** BoraSol is soluble in water and is leachable through normal soil.

## 11. DISPOSAL

**Disposal Guidance:** Small quantities of BoraSol can usually be disposed of at Municipal Landfill sites. No special disposal treatment is required but refer to state and local regulations for applicable site-specific requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such products should, if possible, be re-used for an appropriate application.

**RCRA (40 CFR 261):** BoraSol is not listed under any sections of the Federal Resource Conservation and Recovery Act (RCRA).

## 12. TRANSPORT INFORMATION

**BoraSol Hazardous Material Classification:** BoraSol is not a U.S. Department of Transportation (DOT) Hazardous Material.

**BoraSol Hazardous Substances Classification:** BoraSol is not a DOT Hazardous Substance.

**International Transportation:** BoraSol has no U.N. Number and is not regulated under international rail, highway, water or air transport regulations.

## 13. REGULATORY INFORMATION

**RCRA:** BoraSol is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act or regulations (40 CFR 261 et seq.).

**Superfund:** CERCLA/SARA. BoraSol is not listed under CERCLA (the Comprehensive Environmental Response Compensation and Liability Act) or its 1986 amendments, SARA, (the Superfund Amendments and Reauthorization Act).

**Safe Drinking Water Act:** BoraSol is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron.

**IARC:** The International Agency for Research on Cancer (of the World Health Organization) does not list or categorize BoraSol as a carcinogen.

**California Proposition 65:** BoraSol is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.