

# PACBOR (BORATE)

Pacific Wood Preserving of Bakersfield, Inc.  
5601 District Blvd. Bakersfield, CA 93313

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Product Name: Borate Treated Wood CAS Registry Number: N/A  
Chemical Formula: N/A (Refer to Section 2 for Component I.D.)  
Chemical Name/Synonyms: Borate Treated Wood  
Chemical Family: Inorganic Borates  
Manufacturer: Pacific Wood Preserving of Bakersfield, Inc.  
Address: 5601 District Blvd. Bakersfield, CA 93313  
Emergency Phone Number: CHEMTREC 1-800-424-9300 Date of Issue: August 1, 1994  
General Information: 661-833-0429

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

Borate treated wood products are those which contain > 99% "wood" and < 1% borate (disodium octaborate tetrahydrate). Borates are EPA registered pesticides. Wood/wood dust and disodium octaborate tetrahydrate (CAS No. 12280-03-4) are considered hazardous under the OSHA Hazard Communication Standard. (Refer to Section 8 for occupational exposure limit information.)

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

The primary health hazard posted by this product is thought to be due to inhaling wood dust. The presence of the borate wood preservative in treated wood or wood dust is not expected to affect the toxicity characteristics of wood dust. Wood dust is flammable and depending on moisture content and more importantly, particle size (diameter), wood dust may explode in the presence of an ignition source.

#### POTENTIAL ECOLOGICAL EFFECTS

The only potential ecological hazard associated with borate treated wood dust relates to the borate preservative which has the potential to leach out of wood under conditions of exposure to water over a prolonged period of time. Borate compounds may be harmful to boron-sensitive plants.

#### POTENTIAL HEALTH EFFECTS

Inhalation and dermal (skin) are the primary routes of exposure for wood dust in occupational and other settings.

**INHALATION:** Wood dust may cause unpleasant deposit/obstruction in the nasal passages, resulting in dryness of the nose, dry cough, sneezing, and headaches.

**EYE CONTACT:** Wood dust may cause mechanical irritation.

**CONTACT WITH SKIN:** Wood dust(s) of certain species can elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in erythema and hives.

**INGESTION:** Not applicable. Under normal use, wood/wood dust is not intended for ingestion.

**CHRONIC HEALTH HAZARD:** Wood dust(s), depending on the species, may cause allergic contact dermatitis with prolonged exposure to elevated dust levels.

**MEDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE:** Wood dust may aggravate preexisting conditions or allergies.

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## 4. FIRST AID MEASURES

**INHALATION:** Seek medical assistance if persistent irritation, severe coughing or breathing difficulty occurs.

**EYE CONTACT:** Flush with plenty of water to remove wood dust particles. Seek medical attention if irritation persists.

**SKIN CONTACT:** Seek medical attention should rash, irritation or dermatitis develop.

## 5. FIREFIGHTING MEASURES

**GENERAL HAZARD:** Wood dust is flammable, combustible and may explode in the presence of an ignition source. The presence of borate treated wood preservative (known fire-retardant chemical) in treated wood dust may reduce the flammability hazards to some extent.

**FLAMMABLE LIMITS:** An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dust.

## 6. ACCIDENTAL RELEASE MEASURES

Borate treated wood is not a listed substance under the Resource Conservation and Recovery Act (RCRA) or Comprehensive Environmental Response, Compensation and Liability (CERCLA) regulations.

## 7. HANDLING AND STORAGE

No special handling precautions are required. Keep in a cool dry place away from open flame.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### OCCUPATIONAL EXPOSURE LIMITS

Chemical/Common Name (CAS #)	COMPOSITION	EXPOSURE LIMITS OSHA/ACGIH
Wood (CAS # not applicable) (soft wood or hardwood total dust)	99%	OSHA PEL-TWA = 5 mg/m <sup>3</sup> OSHA PEL-STEL = 10 mg/m <sup>3</sup> ACGIH TLV-TWA = 5 mg/m <sup>3</sup> ACGIH TLV-STEL = 10 mg/m <sup>3</sup>
Disodium Octaborate Tetrahydrate CAS # 12280-03-4 Listed/regulated as "Particulate Not Otherwise Regulated" or "Nuisance Dust".	1%	OSHA PEL-TWA = 15 GM/M <sup>3</sup> (Total Dust) OSHA PEL-TWA = 5 GM/M <sup>3</sup> (Respirable Dust) ACGIH TLV-TWA = 10 MG/M <sup>3</sup>

### TERM DEFINITIONS

PEL	Permissible Exposure Limits	TWA	Time Weighted Average (8 hours)
TLV	Threshold Limit Value	STEL	Short Term Exposure Limit (15 minutes)
OSHA	Occupational Safety and Health Administration	ACGIH	American Conference of Governmental Industrial Hygienists

### PERSONAL PROTECTION

**RESPIRATORY PROTECTION:** A NIOSH/MSHA approved respirator is recommended when allowable exposure limits may be exceeded.

**PROTECTIVE GLOVES/EYE PROTECTION:** Not required for normal industrial exposures, but may be warranted if environment is exceedingly dusty.

**WORK/HYGIENE PRACTICES:** Follow good hygienic and housekeeping practices. Clean-up areas where wood dust settles to avoid excessive accumulation of this combustible material. Minimize practices that generate air borne dust.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Borate treated wood (including wood dust and wood chips) has the same general appearance and physical properties as untreated wood. Wood dust consists of finely divided wood particles generated from sawing, sanding, routing, or chipping solid dimensional lumber or other wood products. Wood chips are similar to wood dust, but coarser.		
ODOR:	Treated and/or untreated wood product may have a slight scented odor.		
VAPOR PRESSURE:	Negligible at 20 degrees C	BOILING POINT:	Not Applicable
MELTING POINT:	Not Applicable	SOLUBILITY IN WATER:	< 0.1%
SPECIFIC GRAVITY:	0.40 - 0.80	% VOLATILE AT 20 DEGREES C (70 DEGREES F):	0.0

## 10. STABILITY AND REACTIVITY

GENERAL:	Borate treated wood is a stable product.
INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:	Avoid contact with oxidizing agents and drying oils. Avoid open flame. Borate treated wood dust may ignite at temperatures in excess of 400 degrees F.
HAZARDOUS DECOMPOSITION OR BY-PRODUCT:	Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, rosin acids, and polycyclic aromatic hydrocarbons.

## 11. TOXICOLOGICAL INFORMATION

No specific toxicological data is available on the borate treated wood itself. However, considerable information is available regarding the toxicity of its components, untreated wood and disodium octaborate tetrahydrate (CAS No. 12280-03-4). The presence of borate wood preservative in the treated wood or wood dust is not expected to affect its inherent toxicity characteristics. Therefore, borate treated wood or wood dust is not expected to affect its inherent toxicity characteristics. Therefore, borate treated wood or wood dust should be considered to be toxicologically equivalent to untreated wood and wood dust. Wood dust has been alleged to cause nasal/paranasal sinus cancer (certain European hardwood: oak and birch). For a detailed discussion of the toxicological effects of the wood preservative component, consult the MSDS for the borate preservative.

## 12. ECOLOGICAL INFORMATION

No specific information is available regarding the ecological effects of borate treated wood or dust. Conditions involving prolonged exposure of borate treated wood or wood dust to water should always be avoided. The wood preservative borate is an inorganic sodium borate salt which contains the element "boron". Although boron is an essential micronutrient for healthy growth of plants, it can be harmful to boron-sensitive plants in higher quantities.

## 13. DISPOSAL CONSIDERATIONS

DISPOSAL GUIDANCE: Borate treated wood and its components are not listed hazardous wastes under any sections of the Resource Conservation and Recovery Act or regulations (40 CFR 261 et seq.). Refer to State and Local regulations for specific requirements.

## 14. TRANSPORTATION INFORMATION

DOT CLASSIFICATION: Borate treated wood is not regulated by DOT. It does not appear on any DOT "Hazardous Material" or "Hazardous Substance" lists.

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## 15. REGULATORY INFORMATION

- OSHA/Cal OSHA: This MSDS document meets the requirements of both OSHA (29 CFR 1910.1200) and Cal OSHA (Title 8 CCR 5194(g)) hazard communication standards. Refer to Section 8 for regulatory exposure limits.
- RCRA: Borate treated wood and its components are not listed as hazardous wastes under any sections of the Resource Conservation and Recovery Act or regulations (40 CFR 261 et seq.).
- CARCINOGEN CLASSIFICATION: Borate treated wood and its components have not been listed or characterized by OSHA, IARC, or NTP.

## 16. OTHER INFORMATION

### PRODUCT LABEL TEXT HAZARD INFORMATION:

**TREATED WOOD DUST  
CAUTION!**

Sawing, sanding or machining wood products can produce wood dust that can cause flammable or explosive hazard.

Wood dust may cause lung, upper respiratory tract, eye and skin irritation. Some wood species may cause dermatitis and/or respiratory allergic effects.

- \* Avoid dust contact with ignition sources.
- \* Sweep or vacuum dust for recovery or disposal.
- \* Avoid prolonged or repeated breathing of wood dust in the air.
- \* Avoid dust contact with eyes and skin.
- \* Refer to borate pesticide MSDS for additional information.

FIRST AID: In case of contact, flush eyes or skin with water. If irritation persists, call a physician.

CONTACT INFORMATION: For additional information, please contact the manufacturer.

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## Guidance Document Management and Disposal of Treated Wood Waste in California.

Pressure treated wood products contain chemical preservatives which, when the products become a waste, may cause the material to be classed as a non-RCRA hazardous waste under California law. Such waste material must be disposed of in a manner that is protective of human health and the environment. This document provides guidance to help assure the material is handled and disposed of in a manner appropriate and in compliance with Health and Safety Code (HSC) §§ 25150.7 and 25150.8 as amended by Assembly Bill 1353 (Matthews, Ch. 597, 2004). The current codes replace variances and provide that treated wood waste can be disposed of at an appropriately permitted landfill as solid waste and will not require disposal at the State's hazardous waste landfills. For detail on the new law see the *Treated Wood Waste Management Fact Sheet* prepared by the California EPA, Department of Toxic Substances Control (DTSC) available at [dtsc.ca.gov](http://dtsc.ca.gov) or [WWPinstitute.org](http://WWPinstitute.org).

The treated wood industry provides this information as general guidance and believes it is accurate based upon consultation with the Department of Toxic Substance Control (DTSC). The handler of the treated wood waste is responsible for legal compliance and should review the laws applicable to treated wood material and discuss any handling concerns with the appropriate agency.

### What is Treated Wood?

*Treated Wood* means wood that has been treated with a preservative to protect it from insects, microorganisms or fungi that can lead to wood decay or deterioration. The most common types of wood preservatives are alkaline copper quaternary (ACQ); copper azole (CA-B); copper boron azole (CBA-A); chromated copper arsenate (CCA); ammoniacal copper zinc arsenate (ACZA); creosote; pentachlorophenol and copper naphthenate. The wood preservatives are registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and with the California Department of Pesticide Regulation. Surface applied coatings, such as paint, varnish and oil stain, are not considered wood preservatives.

### What Is Treated Wood Waste And Where Do These Guidelines Apply?

*Treated Wood Waste* means a treated wood product that is now a waste. Treated wood waste includes treated wood debris (trimmings, scrap and sawdust) and products permanently removed from use (decks, fences, docks, timbers, etc.).

- Treated wood materials that are reused in a manner that is consistent with their original use are not a waste.
- Under federal hazardous waste regulations (RCRA), most wood product wastes are nonhazardous or are exempted from hazardous waste designation. Treated wood waste that is a RCRA hazardous waste must comply with the applicable hazardous waste requirements including manifesting, transportation, treatment, and disposal at a hazardous waste landfill.
- The requirements of HSC §§ 25150.7 and 25150.8 do not apply to treated wood waste that is nonhazardous waste. Nonhazardous waste is 1) not a federal RCRA hazardous waste and 2) does not exhibit hazardous characteristics according to CCR Title 22, Division 4.5, Chapter 11. An example is Disodium Octaborate Tetrathhydrate treated wood, commonly known as borate treated wood.
- Treated wood removed from utility services is not subject to hazardous waste requirements when specified conditions are met. (HSC § 25150.7).

### Do I have Treated Wood Waste? Identifying Treated Wood Material.

The following evaluation tools can help you determine if the waste wood has been treated.

- The wood may be identified by an ink stamp or an end tag indicating treatment.
- Most treated wood used in construction or industrial applications will have been *incised* to enhance treatment. Incised wood, identified by the presence of small closely spaced incisions on the full surface of the wood, has been treated.
- If the material has not been stained or painted it may appear greenish in color. Materials used in industrial or transportation systems may be dark brown in color with a slight petroleum odor.
- A crosscut section of the wood may reveal the preservative treatment as a darker color in the outer ¼ to 1 inch.
- The location of the wood within a project and the project type may also suggest the presence of treated wood. If the wood was in contact with the ground or water, or exposed to the elements, and is not a decay resistant species such as redwood or cedar, it is likely treated material.
- As a generator you can determine if your waste is nonhazardous or choose to manage the material as treated wood waste in accordance with HSC § 25150.7.
- If doubt remains after applying the above evaluation tools, laboratory testing can make a positive evaluation.

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## How and Where Can I Dispose of Treated Wood Waste?

- Do not burn treated wood.
- Do not discard the material on the land or use treated wood as ground mulch.
- Some types of treated wood can be used as fuel in specifically approved co-generation facilities.
- Most waste material should be delivered to an appropriately permitted landfill.
- Over fifty municipal landfills in the State are eligible to take treated wood but the decision to accept the material is up to the individual landfill and approval by the applicable Regional Water Quality Control Board. Always contact the landfill or transfer station prior to delivery to see if the material will be accepted and if any limitations exist! The State Water Resources Control Board maintains a list of landfills at [swrcb.ca.gov/cwphome/land/walist.html](http://swrcb.ca.gov/cwphome/land/walist.html).
- Households may send Treated Wood Waste to approved landfills, transfer stations or their local Household Hazardous Waste Collection Center -- but always call ahead to see if there are limitations.

## Management Standards.

The Health and Safety Code requires that treated wood waste be managed in a specified manner. Some of the requirements are:

- The treated wood waste should be kept separate and not mixed with other waste.
- Scavenging is not allowed.
- Store the waste for no longer than 90 days.
- Stored treated wood waste should be protected from run-on and run-off of water and placed on a surface sufficiently impervious to prevent to the extent practical, contact with, and any leaching to soil or water. For example the material could be stacked on skids and covered with an impervious plastic tarp secured to keep water off; or placed

in a shed or covered container. Treated wood waste may not be placed directly onto land.

- For utility produced treated wood waste, see HSC § 25150.7.

Certain additional standards may apply to treated wood once it is under the authority of the disposal operator or facility.

## Handling Precautions.

There are certain precautions that should be followed in handling treated wood as a product or as a waste.

- Handle according to all applicable California Occupational Safety and Health Act (Cal/OSHA) requirements.
- Avoid contact with skin. Wear gloves and long sleeved shirts. Wash exposed skin areas thoroughly with mild soap and water after working with treated wood.
- Wear a dust mask when machining any wood to reduce the inhalation of wood dust. Avoid frequent or prolonged inhalation of sawdust. Machining operations should be performed outdoors whenever possible to avoid indoor accumulations of airborne sawdust.
- Wear appropriate eye protection to reduce the potential for eye injury from wood particles and flying debris during machining.
- If preservative or sawdust accumulates on clothes, launder before reuse. Wash work clothes separately from other household clothing.

## Further Information.

For additional information on use, handling and disposal of treated wood waste visit [WWPInstitute.org](http://WWPInstitute.org) (click on Treated Wood in California) or [www.dtsc.ca.gov](http://www.dtsc.ca.gov). You can contact the industry disposal hot line at 866-696-8315 or the California Department of Toxic Substances Control at 800-728-6942.

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