

MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **BORATE TREATED WOOD**

SECTION I

MSDS NUMBER:	17.1-OSM
MSDS CODE:	OSM
SYNONYMS:	Borate Treated Wood
MANUFACTURED BY:	Customers of Pac-Chem Limited Liability Company, a subsidiary of Osiose Inc.
DIVISION:	WPD
EPA REGISTRATION NUMBER:	N/A
VENDOR:	N/A
EMERGENCY PHONE:	In United States call 770-228-8434
ADDRESS:	2255 - A Renaissance Drive, Suite 20, Las Vegas, NV 89119
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	January 20, 2000
DATE LAST REVISED:	N/A

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: Borate Treated Wood INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Disodium Octaborate Tetrahydrate	12280-03-4	15 mg/m ³ (Total Dust)	3 mg/m ³ (Respirable Dust)	N/A	1%
Wood*	N/A	TWA= 5 mg/m ³ STEL= 10mg/m ³	TWA= 5 mg/M ³ STEL= 10 mg/M ³	N/A	99%

*Exposure limits are for soft wood or hard wood total dust.

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H ₂ O = 1)	PERCENT VOLATILE BY VOLUME	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)
N/A	N/A	N/A	0.40 - 0.80	0	0
WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
N/A	N/A	Negligible at 20°C	N/A	N/A	N/A
SOLUBILITY IN WATER: <0.1%		REACTIVITY IN WATER: N/A			
APPEARANCE AND ODOR: 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. Treated and/or untreated wood product may have a slight scented odor..					

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE		
N/A	N/A	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.	N/A		
NFPA CODES	HEALTH	0	HMIS CODES:	HEALTH	0
	FLAMMABILITY	1		FLAMMABILITY	1
	REACTIVITY	0		REACTIVITY	0
	OTHER	N/A		PROTECTION	N/A*
EXTINGUISHER MEDIA: Water fog, foam, CO ₂ , dry chemical					

*For normal use situations. Also see Section VIII on page 3.

MATERIAL SAFETY DATA SHEET

SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective equipment and self-contained air unit.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Wood dust is flammable, combustible and may explode in the presence of an ignition source. The presence of the borate wood preservative (known fire-retardant chemical) in treated wood dust may reduce the flammability hazard to some extent.

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y

CONDITIONS TO AVOID (REGARDING STABILITY): Avoid open flame.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with oxidizing agents and drying oils.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, resin acids and polycyclic aromatic hydrocarbons.

HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N

CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

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

SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE: 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. **INHALATION** of wood dust may cause unpleasant deposit/obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing and headaches. **EYE CONTACT** with wood dust may cause mechanical irritation. **SKIN CONTACT** with wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in erythema and hives. **INGESTION** of wood dust is not considered a route of entry under normal conditions of use.

CHRONIC OVEREXPOSURE: Wood dust, depending on the species, may cause allergic contact dermatitis with prolonged exposure to elevated dust levels.

CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?: Yes! The principal health effects reported from occupational exposure to sawdust or wood dust generated from untreated wood are dermatitis, rhinitis, conjunctivitis, reduced or suppressed mucociliary clearance rates, chronic, obstructive lung changes, and nasal sinus cancer. Skin and respiratory sensitization has been reported from exposure to hardwood dust. Epidemiological studies have been reported on carcinogenic risks of employment in the furniture making industry, the carpentry industry, and the lumber and sawmill industry. IARC has determined that there is sufficient evidence to classify untreated wood dust as a nasal carcinogen in humans (Ref. Monograph 62).

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Wood dust may aggravate pre-existing respiratory conditions or allergies.

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 the 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 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).



EMERGENCY AND FIRST AID PROCEDURES



EMERGENCY PHONE NUMBER OF MANUFACTURER: In U.S. call 770-228-8434; In Canada call 905-854-2244

1. **INHALATION:** Seek medical assistance if persistent irritation, severe coughing or breathing difficulty occurs.
2. **EYE CONTACT:** Flush with plenty of water to remove wood dust particles. Seek medical attention if irritation persists.
3. **SKIN CONTACT:** Seek medical attention should rash, irritation or dermatitis develop.
4. **INGESTION:** Not considered a hazard under normal use of product. Not intended for ingestion.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

SHIPPING DESCRIPTION: Not Regulated by either US DOT or Canada's Transportation of Dangerous Goods.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store Borate Treated lumber and plywood off the ground, in a dry place, protected from weather. While at the job site cover with plastic tarps, allowing for adequate air circulation. Keep in cool, dry place away from open flame. 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 airborne dust.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Maintain a clean workplace. Clean up scrap lumber and sawdust.

MATERIAL SAFETY DATA SHEET

WASTE DISPOSAL METHODS: 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. Dispose of in an approved landfill according to Federal, State, Provincial and local regulations.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: A NIOSH/MSHA approved respirator is recommended in high dust environments to avoid prolonged or repeated breathing of wood dust in the air.

VENTILATION REQUIREMENTS: In enclosed environments, ventilation may be required in order to maintain exposure limits.

PROTECTIVE GLOVES: As necessary to avoid dust contact with skin.

EYE PROTECTION: As necessary to avoid dust contact with eyes.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: As necessary to avoid dust contact with skin.

WORK/HYGIENIC 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 airborne dust.

OSHA Hazard Information Label Text:

BORATE TREATED WOOD DUST CAUTION!

Sawing, sanding or machining wood products can produce wood dust that can cause a 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 TREATED WOOD MSDS for additional information.

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

CONTACT: For additional information, please contact the manufacturer.

N/A = Not Applicable

NOTICE: The information herein is given in good faith but no warranty, expressed or implied, is made, and Osmose, Inc. expressly disclaims liability from reliance on such information.

Information on this form is furnished for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may result in a violation of law or constitute grounds for legal action.