

MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **HI-BOR TREATED WOOD**

SECTION I

MSDS NUMBER:	17.2-OSM
MSDS CODE:	OSM
SYNONYMS:	N/A
MANUFACTURED BY:	Customers of Pac-Chem Limited Liability Company, a subsidiary of Osmose Inc.
EMERGENCY PHONE:	800-686-6676
OTHER CALLS:	770-233-4200 or 716-882-5905
ADDRESS:	2255 - A Renaissance Drive, Suite 20, Las Vegas, NV 89119
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	August 13, 2004
DATE LAST REVISED:	June 8, 2006 (replaces April 5, 2006)

IMPORTANT INFORMATION

- **Intended for Interior Use Only! Store off the ground and cover to protect from water and allow for ventilation**
- **Do Not Burn Preserved Wood**
- **Do Not Use Preserved Wood As Mulch**
- **Treated Or Untreated Wood Dust May Cause Eye, Skin & Respiratory Irritation**
- **Some Untreated Wood Species May Cause Allergic Skin Or Respiratory Effects In Sensitized Individuals**
- **Wear Dust Mask & Goggles When Cutting Or Sanding Wood**
- **Wear Gloves When Working With Wood**
- **Some preservative may migrate into soil/water or dislodge from the treated wood.**
- **For Additional Product Information, Visit www.osmose.com.**

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: Hi-BOR Treated Wood	CAS	OSHA PEL/TWA	ACGIH TLV/TWA	%
INGREDIENT NAME				
Disodium Octaborate Tetrahydrate	12280-03-4	15 mg/m ³ (Total Dust) 5 mg/m ³ (Respirable dust)	10 mg/m ³	1.25 – 7.5%
Wood (<i>Exposure limits are for all species except western red cedar, which has a TLV of 0.5 mg/m³.</i>)	N/A	15 mg/m ³ (Total Dust) 5 mg/m ³ (Respirable dust)	1 mg/m ³ (Inhalable)	90 – 98%
Depending on the additives applied to the treating solution, this wood may also contain < 1% of CLEANWOOD MOLD INHIBITOR. CLEANWOOD contains the following ingredients, which are present in the wood at ppm levels. None of these ingredients are classified as carcinogens.				
5-Chloro-2-methyl-4-isothiazolin-3-one	26172-55-4	N/A	N/A	13 – 27 ppm
2-Methyl-4-isothiazolin-3-one	2682-20-4	N/A	N/A	5 – 10 ppm
Magnesium chloride	7786-30-3	N/A	N/A	12 – 24 ppm
Magnesium nitrate	10377-60-3	N/A	N/A	22 – 45 ppm
Depending on the additives applied to the treating solution, this wood may also contain <1% of a colorant.				

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: Hi-Bor 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.					

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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, CO2, dry chemical			

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

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 anticipated to be a significant route of overexposure under normal use conditions.

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?: While borates are not listed as a carcinogen, wood dust is listed as a carcinogen. 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 have 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).

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EMERGENCY AND FIRST AID PROCEDURES



1 EMERGENCY PHONE NUMBER OF MANUFACTURER: 800-686-6676

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 Hi-Bor 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.

WASTE DISPOSAL METHODS: Hi-bor 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.

N/A = Not Applicable

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