Wood Dust (Not Preservative Treated)

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Revision Date: 2/21/2012

1. Product Identification

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturing Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Dust (Not Preservative Treated)</td>
<td>Various</td>
</tr>
</tbody>
</table>

Synonyms: Sawdust, Sanderdust

2. Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>Percent</th>
<th>Agency</th>
<th>Exposure Limits</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Dust (Not Preservative Treated)</td>
<td>None</td>
<td>NAP</td>
<td>OSHA</td>
<td>PEL-TWA 15 mg/m³</td>
<td>Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA</td>
<td>PEL-TWA 5 mg/m³</td>
<td>Respirable dust fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TLV-TWA 0.5 mg/m³</td>
<td>Inhalable, Western red cedar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TLV-TWA 1 mg/m³</td>
<td>Inhalable, All other species</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Recommended¹</td>
<td>PEL-TWA 5 mg/m³</td>
<td>Softwood or hardwood total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Recommended¹</td>
<td>PEL-STEL 10 mg/m³</td>
<td>Softwood or hardwood total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Recommended¹</td>
<td>PEL-TWA 2.5 mg/m³</td>
<td>Western red cedar total dust</td>
</tr>
</tbody>
</table>

¹ In AFL-CIO v. OSHA 965 F. 2d 962 (11th Cir. 1992), the court overturned OSHA’s 1989 Air Contaminants Rule, including the specific PELs for wood dust that OSHA had established at that time. The 1989 PELs were: TWA 5 mg/m³; STEL (15 MIN) - 10 mg/m³ (ALL SOFTWOODS AND HARDWOODS, EXCEPT WESTERN RED CEDAR); WESTERN RED CEDAR: TWA - 2.5 mg/m³.

Wood dust is now officially regulated as an organic dust under the Particulates Not Otherwise Regulated (PNOR) or Inert or Nuisance Dust categories at PELs noted under the Hazardous Ingredients section of this MSDS. However, A NUMBER OF STATES HAVE INCORPORATED PROVISIONS OF THE 1989 STANDARD IN THEIR STATE PLANS. ADDITIONALLY, OSHA HAS ANNOUNCED THAT IT MAY CITE COMPANIES UNDER THE OSH ACT GENERAL DUTY CLAUSE UNDER APPROPRIATE CIRCUMSTANCES FOR NON-COMPLIANCE WITH THE 1989 PELs.

3. Hazard Identification

Appearance and Odor: Light to dark colored, granular solid. Color and odor are dependent on the wood species and time since dust was generated. Particles generated by any manual or mechanical cutting or abrasion process performed on wood.

Primary Health Hazards: The primary health hazard posed by this product is thought to be due to inhaling wood dust.

Primary Route(s) of Exposure:
- ☐ Ingestion:
- ✈ Skin:
- ☑ Inhalation:
- ☑ Eye:
3. Hazard Identification (cont’d.)

Medical Conditions Generally Aggravated by Exposure: Wood dust may aggravate pre-existing respiratory conditions or allergies.

Signs and Symptoms of Exposure:
Acute: Wood dust can cause eye irritation. Certain species of wood dust can elicit allergic contact dermatitis in sensitized individuals. Wood dust may cause respiratory irritation, nasal dryness, coughing, sneezing, wheezing as a result of inhalation.

Chronic: Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer.

Carcinogenicity Listing:
- NTP: Wood dust, Known Human Carcinogen
- IARC Monographs: Wood dust, Group 1
- OSHA Regulated: Not listed

NTP: According to its Tenth Report on Carcinogens, NTP states, “Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans. An association between wood dust exposure and cancer of the nose has been observed in many case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Strong and consistent associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure.”

IARC - Group I: Carcinogenic to humans; sufficient evidence of carcinogenicity. This classification is primarily based on studies showing an association between occupational exposure to wood dust and adenocarcinoma to the nasal cavities and paranasal sinuses. IARC did not find sufficient evidence of an association between occupational exposure to wood dust and cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum.

4. Emergency and First-Aid Procedures

Ingestion: NAP
Eye Contact: Wood dust may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particles. Get medical help if irritation persists.
Skin Contact: Wash with water to remove dust particles. Seek medical advice if a rash, persistent irritation or dermatitis occurs.
Skin Absorption: NAP
Inhalation: Wood dust may cause unpleasant obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing and headaches. Remove to fresh air. If persistent irritation, severe coughing or breathing difficulties occur, get medical advice.

5. Fire and Explosion Data

Flash Point (Method Used): NAP
Flammable Limits: LFL = Wood dust: 40 grams per cubic meter of air  UFL = NAP
Extinguishing Media: Water, Carbon Dioxide, Sand
Autoignition Temperature: Variable (typically 400° – 500°F)
Special Firefighting Procedures: Use water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into air. Remove burned or wet dust to open area after fire is extinguished.
Unusual Fire and Explosion Hazards: Wood dust may present a strong to severe explosion hazard if dust cloud contacts an ignition source.
Explosive Limits in Air: 40 grams/m³ (LEL)
NFPA Rating (Scale 0-4): Health = 1 Fire = 1 Reactivity = 0
6. Accidental Release Measures

**Steps to be Taken In Case Material Is Released or Spilled:** Sweep up or vacuum up spills for recovery or disposal. Avoid creating dust conditions. Place recovered wood dust in a container for proper disposal.

7. Handling and Storage

**Precautions to be Taken In Handling and Storage:** Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. Avoid contact with oxidizing agents and drying oils.

8. Exposure Control Measures, Personal Protection

**Personal Protective Equipment:** Protective equipment may be needed such as gloves, goggles, or safety glasses and approved dust respirators depending upon dust conditions.

**Ventilation:** Provide adequate general and local exhaust ventilation to maintain healthful working conditions.

Due to the explosive potential of wood dust when suspended in air, ventilation systems should be kept clean and precautions should be taken to prevent sparks or other ignition sources.

9. Physical/Chemical Properties

**Physical Description:** Light to dark colored, granular solid. Color and odor are dependent on the wood species and time since dust was generated.

- **Boiling Point (@ 760 mm Hg):** NAP
- **Evaporation Rate (Butyl acetate = 1):** NAP
- **Freezing Point:** NAP
- **Melting Point:** NAP
- **Molecular Formula:** NAP
- **Molecular Weight:** NAP
- **Oil-water distribution coefficient:** NAP
- **Odor threshold:** NAP
- **pH:** NAP
- **Solubility in Water (% by weight):** Insoluble
- **Specific Gravity (H₂O = 1):** Variable, depends on species and moisture content
- **Vapor Density (air = 1; 1 atm):** NAP
- **Vapor Pressure (mm Hg):** NAP
- **Viscosity:** NAP
- **% Volatile by Volume [@ 70°F (21°C)]:** NAP

10. Stability and Reactivity

- **Stability:** ☐ Unstable ☒ Stable under normal conditions
- **Conditions to Avoid:** Avoid open flame and sparks
- **Incompatibility (Materials to Avoid):** Avoid contact with oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperature in excess of 400°F.
- **Hazardous Decomposition or By-Products:** Thermal oxidative degradation of wood produces irritating and toxic fumes and gases, including carbon monoxide, aldehydes and organic acids.
- **Hazardous Polymerization:** NAP
- **Sensitivity to Mechanical Impact:** NAP
- **Sensitivity to Static Discharge:** NAP
11. Toxicological Information

Wood Dust:
Wood dust (softwood or hardwood): OSHA Hazard Rating = 3.3; moderately toxic with probable oral lethal
dose to humans being 0.5-5 g/kg (about 1 pound for a 70 kg or 150 pound person). Source: OSHA
Wood dust (generated from sawing, sanding or machining the product) may cause nasal dryness, irritation,
coughing and sinusitis. National Toxicology Program (NTP) and The International Agency for Research on
Cancer (IARC) classify wood dust as a human carcinogen (IARC Group 1). This classification is based
primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal
sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to
associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach,
colon or rectum with exposure to wood dust.

Additional Toxicity Data: See acute and chronic health effects provided in Section 3: Hazard Identification.
Target Organs: See acute and chronic health effects provided in Section 3: Hazard Identification.

12. Ecological Information

Environmental Fate: NAP
Environmental Toxicity: None

13. Disposal Considerations

Waste Disposal Method: Incineration in accordance with local, state, and federal regulations is preferred
because fugitive emissions can be effectively controlled. Landfill disposal in accordance with local, state,
and federal regulations is acceptable if actions are taken to contain the material until it can be covered by
other wastes or landfill cover materials.

14. Transport Information

Not regulated as a hazardous material by the U.S. Department of Transportation.
Not listed as a hazardous material in Canadian Transportation of Dangerous Goods (TDG).

15. Regulatory Information

TSCA: This product complies with TSCA inventory requirements.
CERCLA: NAP
DSL: NAP
OSHA: Wood dust may be hazardous under the criteria of the federal OSHA Hazard Communication
STATE RIGHT-TO-KNOW:
Pennsylvania: Wood dust appears on Pennsylvania’s Appendix A – Hazardous Substance Lists

California: California’s Safe Drinking Water and Toxic Enforcement Act of 1986 (Initiative Measure Proposition
65): Title 22 California Code of Regulations requires that a clear and reasonable warning be given before
exposure to chemicals listed by the State to cause cancer. Wood dust is on California’s list of substances
known to the State to cause cancer. See required warning at the end of this document.
SARA 313 Information:
SARA 311/312 Hazard Category: NAP
FDA: NAP
WHMIS Classification: Wood dust is not considered a controlled product.
16. Additional Information

Date Prepared: 11/24/87  
Date Revised: 2/21/2012  
Prepared By: Flakeboard Company Limited  
Flakeboard MSDS available on: www.flakeboard.com

User’s Responsibility: The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user’s responsibility to determine if the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to make sure that this sheet is the most up-to-date issue.

Definition of Common Terms:
ACGIH = American Conference of Governmental Industrial Hygienists  
C = Ceiling Limit  
CAS# = Chemical Abstracts System Number  
DOT = U. S. Department of Transportation  
DSL = Domestic Substance List  
EC50 = Effective concentration that inhibits the endpoint to 50% of control population  
EPA = U. S. Environmental Protection Agency  
IARC = International Agency for Research on Cancer  
IATA = International Air Transport Association  
IMDG = International Maritime Dangerous Goods  
LCLo = Lowest concentration in air resulting in death  
LC50 = Concentration in air resulting in death to 50% of experimental animals  
LDLo = Lowest dose resulting in death  
LD50 = Administered dose resulting in death to 50% of experimental animals  
LEL = Lower Explosive Limit  
LFL = Lower Flammable Limit  
MSHA = Mining Safety and Health Administration  
NAP = Not Applicable  
NAV = Not Available  
NIOSH = National Institute for Occupational Safety and Health  
NPRI = Canadian National Pollution Release Inventory  
NTP = National Toxicology Program  
OSHA = Occupational Safety and Health Administration  
PEL = Permissible Exposure Limit  
RCRA = Resource Conservation and Recovery Act  
STEL = Short-Term Exposure Limit (15 minutes)  
TCLo = Lowest concentration in air resulting in a toxic effect  
TDG = Canadian Transportation of Dangerous Goods  
TDLo = Lowest dose resulting in a toxic effect  
TLV = Threshold Limit Value  
TSCA = Toxic Substance Control Act  
TWA = Time-Weighted Average (8 hours)  
UFL = Upper Flammable Limit  
WHMIS = Workplace Hazardous Materials Information System
WOOD DUST LABEL

WOOD DUST

(For All Wood Dust, Wood and Wood Products Not Preservative Treated)

CAUTION

WOOD DUST CAN BE PRODUCED BY SAWING, SANDING OR MACHINING WOOD AND WOOD PRODUCTS
FLAMMABLE - POSSIBLE EXPLOSION HAZARD
MAY CAUSE RESPIRATORY, EYE AND SKIN IRRITATION
SOME SPECIES MAY CAUSE DERMATITIS OR ALLERGIC RESPONSE
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) CLASSIFIES WOOD DUST AS A NASAL CARCINOGEN IN HUMANS
THE NATIONAL TOXICOLOGY PROGRAM (NTP) CLASSIFIES WOOD DUST AS A KNOWN HUMAN CARCINOGEN

For Additional Information See the Material Safety Data Sheet

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California Proposition 65
Notification Requirement

Warning

Drilling, sawing, or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

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