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MATERIAL SAFETY DATA SHEET

TRADE NAME	Wood Dust (Untreated)
SYNONYMS	None
CAS NO.	None
DESCRIPTION	

Particles generated by any manual or mechanical cutting or abrasion process performed on wood.

PHYSICAL DATA

Boiling Point	Not applicable
Specific Gravity	Variable (Dependent on wood species and moisture content)
Vapor Density	Not applicable
% Volatiles By Vol.	Not applicable
Melting Point	Not applicable
Vapor Pressure	Not applicable
Solubility in H ₂ O (% by wt.)	Insoluble
Evaporation Rate (Butyl Acetate = 1)	Not applicable
pH	Not applicable
Appearance and Odor	Light to dark colored granular solid. Color and odor are dependent on the wood species and time since dust was generated.

FIRE AND EXPLOSION DATA

Flash Point	Not applicable
Autoignition Temperature	Variable (typically 400-500 degrees F)
Explosive Limits in Air	40 grams/m ³ (LEL)
Extinguishing Media	Water, CO ₂ , Sand
Special Fire Fighting Procedures	Use water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into the air. Remove burned or wet dust to open area after fire is extinguished.
Unusual Fire and Explosion Hazard	Wood dust is a strong to severe explosion hazard if a dust "cloud" contacts an ignition source.

HEALTH EFFECTS INFORMATION

Exposure Limit	ACGIH TLV ® : TWA – 5.0 mg/m ³ ; STEL (15 min.) – 10.0 mg/m ³ (softwood); TWA – 1.0
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mg/m³ (certain hardwoods such as beech and oak)

¹See important footnote below concerning OSHA PELs for wood dust

OSHA PEL: TWA – 15.0 mg/m³ (total dust); 5.0 mg/m³ (respirable fraction)

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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 – 5.0 MG/M³; STEL (15 MIN.) – 10.0 MG/M³ (ALL SOFT AND HARD WOODS, 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 Health Effects Information 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.

Skin and Eye Contact

Wood dust can cause eye irritation. Various species of wood dust can elicit allergic contact dermatitis in sensitized individuals.

Ingestion

Not applicable

Skin Absorption

Not known to occur

Inhalation

May cause nasal dryness, irritation and obstruction. Coughing, wheezing and sneezing; sinusitis and prolonged colds have also been reported. Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and /or irritation. IARC classifies wood dust as a carcinogen to humans (Group1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC 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.

REACTIVITY DATA

Conditions Contributing to Instability Incompatibility	Stable under normal conditions. Avoid contact with oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperatures in excess of 400 degrees F.
Hazardous Decomposition Products	Thermal oxidative degradation of wood produces irritating and toxic fumes and gases, including CO, aldehydes and organic acids.
Conditions Contributing to Polymerization	Not applicable

PRECAUTIONS AND SAFE HANDLING

- Avoid eye contact.
- Avoid repeated or prolonged contact with skin. Careful bathing and clean clothes are indicated after exposure:
- Avoid prolonged or repeated breathing of wood dust in the air.
- Avoid contact with oxidizing agents and drying oils.
- Avoid open flame.

GENERALLY APPLICABLE CONTROL MEASURES

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

Wear goggles or safety glasses. Other protective equipment such as gloves and approved dust respirators may be needed depending upon dust conditions.

EMERGENCY AND FIRST AID PROCEDURES

Eyes	Flush with water to remove dust particles. If irritation persists, get medical attention.
Skin	If a rash or persistent irritation or dermatitis occur, get medical advice where applicable before returning to work where wood dust is present.
Inhalation	Remove to fresh air. If persistent irritation, severe coughing, or breathing difficulties occur, get medical advice before returning to work where wood dust is present.
Ingestion	Not applicable

SPILL/LEAK CLEAN UP PROCEDURES

Sweep or vacuum spills for recovery/or disposal; avoid creating dust conditions. Provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for proper disposal.

IMPORTANT:

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MATERIAL SAFETY DATA SHEET

Product identification	Film faced birch plywood.phenol – formaldehyde bonded
Synonyms	Finnish phenolic film faced plywood, exterior
Trade name	Finnform
Description	This panel product contains birch veneers bonded together using phenol-formaldehyde resin.
Potential airborne releases	This product may release minute quantities of formaldehyde in gaseous form but below 0.1 ppm concentration. Manual or mechanical cutting or abrasion processes performed on the product can result in generation of wood dust.

PHYSICAL DATA

Boiling point	Not applicable
Specific gravity (H ₂ O =1)	<1
Vapor density	Not applicable
% volatiles by volume	0
Melting point	Not applicable
Vapor pressure	Not applicable
Solubility in H ₂ O (% by weight)	<0.1%
Evaporation rate (butyl acetate = 1)	Not applicable
pH	Not applicable
Appearance	Reddish color based on the film coating

FIRE AND EXPLOSION DATA

Flash point	Not applicable
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Autoignition temperature	Not available (will depend upon duration of exposure to heat source and other variables).
Explosive limits in air	See below under "Unusual fire and explosion hazards"
Extinguishing media	Water, carbon – dioxide, sand
Special fire fighting procedures	None
Unusual fire explosion hazards	Sawing, sanding or machining can produce wood dust as a by-product, which may present an explosion hazard if a dust cloud contacts an ignition source. An airborne concentration of 40 grams of dust per cubic meter of air is often used as the LEL for wood dust.

REACTIVITY DATA

Conditions contributing to instability	Stable under normal conditions
Incompatibility	Avoid contact with oxidizing agents. Avoid open flame. Product may ignite in excess of 400 degrees F.
Hazardous decomposition products	Thermal and/or thermal oxidative decomposition can produce irritating and toxic fumes and gases, including carbon monoxide, aldehydes, organic acids, and polynuclear aromatic compounds.
Hazardous polymerization	Not applicable

HEALTH EFFECTS INFORMATION

Exposure limits:

Formaldehyde	OSHA PEL – TWA 0.75 ppm OSHA PEL – STEL 2 ppm ACGIH TLV – CEILING 0.3 ppm
Wood dust	OSHA 1989 PEL – TWA 5mg/m ³ OSHA 1989 PEL –STEL 10 mg/m ³
Formaldehyde emission	Allowed value 0.1 ppm Measured value with this product 0.01 ppm (according to standard EN 120)
Eye contact	The dust from plywood can cause irritation and inflammation.
Burning	According to the ISO/DIS 5660 test the toxicity index of fire effluents was small, but there are many compounds in smoke gases which can cause irritation to eyes, nose and throat.

Ingestion

Not likely to occur

Inhalation:

Wood dust

May cause nasal dryness, irritation and obstruction. Coughing, wheezing and sneezing; sinusitis and prolonged colds have also been reported.

Wood dust, depending on species*), may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and /or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancer of the oropharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.*) The risk of nasal cancer was the subject of a joint Nordic study. No case caused by a Finnish tree species (birch, spruce) was found in Finland. Hernberg & al. Nasal cancer and occupational exposures. *Scand j work environ health* 9 (1983) 208-213

PRECAUTIONS, SAFE HANDLING

In higher temperatures (>212 degrees Fahrenheit) there may build – up noxious gases. Then provide adequate ventilation.

Wood dust: Avoid dusty conditions and provide good ventilation.

GENERAL APPLICABLE CONTROL MEASURES

Ventilation: Provide adequate general and local exhaust ventilation to keep airborne contaminant concentration levels below the OSHA PELs.

Personal protective equipment: Wear goggles or safety glasses when manufacturing or machining the product. Wear NIOSH/MSHA approved respirator when the allowable exposure limits may be exceeded. Other

protective equipment such as gloves and outer garments may be needed depending on dust conditions.

EMERGENCY AND FIRST AID PROCEDURES

Eyes	Flush eyes with large amounts of water. Remove to fresh air. If irritation persists get medical attention.
Skin	Wash affected area with soap and water. Get medical advice if rash or persistent irritation or dermatitis occurs.
Inhalation	Remove to fresh air. Get medical advice if persistent irritation, severe coughing or breathing difficulty occurs.
Ingestion	Not applicable

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