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EMERGENCY TELEPHONE NO.: (800) 424-8300 CHEMTREC

SECTION I. MATERIAL IDENTIFICATIONMaterial Name: **WOOD DUST**

Other Designation: Sawdust, Wood shavings, Sander dust, hog fuel.

Manufacturer: Available as a commodity from many sources. May also result from the cutting, drilling, shaping or general handling of wood or wood products.

SECTION II. INGREDIENTS AND HAZARDS

<u>COMPONENT</u>	<u>%</u>	<u>HAZARD DATA</u>
Finely Divided Wood Particles	ca 100	TWA 5 mg/m <sup>3</sup> * TWA 1 mg/m <sup>3</sup> * STEL 10 mg/m <sup>3</sup> *

\*ACGIH (1986-1987) TLV's: TWA 5 mg/m<sup>3</sup> for soft wood; TWA 1 mg/m<sup>3</sup> for certain hardwoods (as beech & oak)  
STEL 10 mg/m<sup>3</sup> for soft wood

SECTION III. PHYSICAL DATA

Specific Gravity (H<sub>2</sub>O = 1) - - - - - < 1  
Solubility in water - - - - - nil  
Heat of Combustion, BTU/lb (typical) - - - - - ca 8,000-10,000  
Appearance & Odor: Light yellow to buff-colored granular or finely powdered solid. Odor is dependent on the wood source and aging.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point: None Autoignition Temperature: Variable. \*\* Flammability Limits in Air: Variable. \*\* Lower: 0.035 oz/ft<sup>3</sup>  
\*\* Values depend on type of wood/wood product, particle size, level of moisture in wood/wood product, time and rate of heating, etc. (Typical white pine autoignition would be at about 380 - 500°F.)

Extinguishing Media: Determined by surrounding fire. Use a water spray to wet down small amounts of 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 out.

Unusual Fire and Explosion Hazards: Wood dust is a strong to severe explosion hazard if a dust "cloud" contacts an ignition source. Partially burned dust is especially hazardous if dispersed in air.

SECTION V. REACTIVITY DATA

Stability: Unstable \_\_\_\_\_ Stable X

Wood dust is readily combustible. Keep in a cool dry place away from ignition sources. Hot, humid storage\* can result in spontaneous heating or combustion. Partially burned or scorched wood dust can be hazardous to store. Avoid contact with oxidizing agents and with drying oils.

Thermo-oxidative degradation (burning) of wood produces irritating and toxic fumes and gases, including CO, aldehydes and organic acids.

212°F has been suggested as the upper temperature limit for continuous exposure for wood without risk of ignition. (Wood dust may require a still lower temperature.) White pine flour as a "cloud" in air requires 0.040 Joules/minute of energy for ignition and can produce an explosion pressure of 113 psig max.

\*Wood particles can be contaminated with thermoactinomyces organisms.

## WOOD DUST

### SECTION VI. HEALTH HAZARD INFORMATION

**Effects of Overexposure:** Avoid prolonged or repeated breathing of wood dust in air. Repeated exposures (even below  $5 \text{ mg/m}^3$ ) to certain wood dusts, such as western red cedar, can produce allergenic responses in a few sensitive individuals.\* Avoid repeated or prolonged contact with the skin, which can also cause allergenic responses. If allergy, such as dermatitis, asthma, or bronchitis develops, it may be necessary to remove the sensitized worker from further exposure to wood dust (and also, perhaps to wood-based products like turpentine and rosin).

\* Many kinds of woods are suspected to be toxic. Patty (page 1218) lists as toxic woods: Boxwood, cashew, mahogany, red cedar, yew, rosewood, satinwood, and teak. These are known to cause skin, eye, and URT irritation along with allergenic responses to asthma.

#### First Aid:

**Inhalation:** Remove to fresh air. If persistent irritation, severe coughing, breathing difficulties, or rash occur, get medical advice.

**Eye Contact:** Flush with water to remove dust particles from the eye. If irritation persists, get medical attention.

**Skin Contact:** If a rash, or persistent irritation or dermatitis occur, get medical advice.

### SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

#### Steps to be Taken in Case Material is Released or Spilled:

Sweep up or vacuum up\*\*\* spills for recovery or disposal avoiding dusting conditions. Provide good ventilation. Place recovered wood dust in a container for proper handling.

\*\*\* See note listed in Section VIII.

**Disposal:** In accordance with Federal, State and local regulations. Normally deposited in a landfill or incinerated. Disposal is the responsibility of the end user.

### SECTION VIII. SPECIAL PROTECTION INFORMATION

**Ventilation:** Where this material is handled or used, provide adequate explosion-proof ventilation to meet TLV requirements.\*\*\*

\*\*\*Due to the explosive potential of wood dust when suspended in air, precautions should be taken to prevent sparks or other ignition sources in ventilation equipment. Proper electrical equipment for use in flammable dust conditions is recommended.

**Respiratory Protection:** When dusting is excessive, an approved dust respirator may be needed and precautions should be taken to avoid generation of explosive levels of wood dust in the air.

**Eye Protection:** Use safety glasses or chemical goggles (as conditions warrant) to protect the eyes from wood dust.

**Other Protective Equipment:** The use of clean body-covering work clothing is recommended to reduce exposure of skin to wood dust.

Follow good housekeeping practices; clean up areas where wood dust settles to avoid excessive accumulation of this combustible material.

### SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

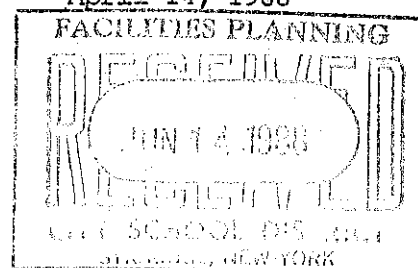
Follow good hygienic practice. Wash frequently; wear clean work clothing.

The chronic effects of skin contact with wood dust are not fully known and may vary from one wood to another.

One study infers that exposure to wood dust has been statistically associated with nasal cancer in British furniture workers. (CCDATA Bulletin, Nov. 1978).

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April 14, 1988



TRADE NAME Wood Dust

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 <sub>2</sub> 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 °F)
Explosive Limits in Air	40 grams/M <sup>3</sup> (LEL)
Extinguishing Media	Water, CO <sub>2</sub> , 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 an open area after the 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 <sup>(R)</sup> : TWA-5.0 mg/m <sup>3</sup> ; STEL (15 min.) - 10 mg/m <sup>3</sup> (softwood) TWA-1.0 mg/m <sup>3</sup> (Certain Hardwoods such as Beech and Oak) OSHA PEL - No Current PEL
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.
Chronic Effects	Wood dust, depending upon species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and / or irritation. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer. Wood dust is not listed as a carcinogen by IARC, NTP, ACGIH or OSHA.

## REACTIVITY DATA

Conditions Contributing to Instability	Stable under normal conditions.
Incompatibility	Avoid contact with oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperatures in excess of 400° F.
Hazardous Decomposition Products	Thermal-oxidative degradation of wood produces irritating and toxic toxic fumes and gases, including CO, aldehydes and inorganic 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 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 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; avoiding 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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