

**SAFETY DATA SHEET
WOOD FLOUR / SAWDUST**

SECTION 1 - IDENTIFICATION

Product Name: Wood Flour (All Species – All Grades) / Sawdust
DESCRIPTION: Particles generated by any manual or mechanical cutting or abrasion process performed on wood.
Distributed by The Rot Doctor
P.O. BOX 30612
Seattle, WA 98113
(206)364-2155
FOR CHEMICAL EMERGENCY **CALL INFOTRAC** - Day or Night **1-800-535-5053**
Spill, Leak, Fire, Exposure or Accident Outside the United States call Collect 1-352-323-3500
Safety Data Sheet Version Number: Version 1.1

SECTION 2 - HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: Warning!

Product Description: Light to dark colored granular solid. Color and odors are dependent on the wood species and the time since dust was generated.
Health Hazards: Can cause eye and skin irritation upon contact. Various species of wood dust can cause allergic contact dermatitis in sensitized individuals. Inhalation of dust can cause respiratory tract irritation.
Flammability Hazards: Wood flour is combustible and explosive when airborne. Wood flour or wood dust is an explosion hazard if a “cloud” contains an ignition source.
Reactivity Hazards: This product is not reactive.
Environmental Hazards: Release of the product is not expected to cause long term adverse effects to the aquatic environment.
Emergency Recommendations: Emergency responders must have personal protective equipment and fire protection appropriate for the situation to which they are responding.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Components: 100% Natural Wood Flour
CAS #: N/A
Impurities and/or Stabilizing Additives: None

SECTION 4 - FIRST AID MEASURES

Eye Contact: Flush with water to remove dust particles for 15 minutes. If irritation persists, get medical attention.
Skin Contact: In case of contact, wash thoroughly with soap and large amounts of water. If a rash or persistent irritation or dermatitis occurs, 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.

SECTION 5 - FIRE-FIGHTING MEASURES

Flash Point: Not applicable

Auto-ignition Temperature: Variable with exposure to temperatures as low as 212o F (typically 400-500o F)

Flammability Limits in Air: 40 grams per cubic meter (LEL)

Suitable Extinguishing Media: Water, Sand, CO2

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 an explosive hazard and the dust “cloud” may explode in the presence of an ignition source. In the form of dust, this material is sensitive to static discharge and may form explosive mixtures in air. An airborne concentration of 40 grams of dust per cubic meter of air is often used as the LEL for wood dusts.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL/LEAK RESPONSE:

Sweep or vacuum spills for recovery or disposal; avoiding creating dusty conditions. Provide good ventilation and remove any potential ignition sources where dust conditions may occur. Place recovered wood dust in a container for proper disposal. Follow personal protective equipment recommendations found in Section 8 of this SDS. Keep unnecessary people out of clean-up area.

Dispose of in accordance with appropriate U.S. Federal, State, and local Hazardous Waste Disposal Regulations; also regulations of Canada, Australia, EU Member States, and Japan if applicable. (See Section 13, Disposal Considerations)

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING AND STORAGE:

- Avoid eye contact.
- Avoid repeated or prolonged contact with skin. Wash hands, face, and clothing thoroughly after exposure.
- Avoid prolonged or repeated breathing of wood dust in the air.
- Avoid contact with oxidizing agents and drying oils. Avoid contact with moisture causing biologic activity, as spontaneous combustion under certain conditions may be possible.
- Avoid open flame.
- Avoid eating, drinking, smoking, or applying cosmetics while handling this product.
- Use in a well-ventilated location
- Store in a dry, cool, clean and ventilated area to avoid heat and humidity.

-Wood flour is extremely combustible and explosive when airborne. Wood flour or wood dust has a strong to severe explosion hazard if a dust "cloud" contains an ignition source. Refer to NFPA 664 and NFPA 68 for additional safe handling requirements.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Name/CAS#/%: Wood Flour/None/100%

OSHA Current Exposure Limits

OSHA PEL-TWA 15 mg/m³ (total dust)

OSHA PEL-TWA 5 mg/m³ (respirable dust)

ACGIH TLV-TWA 1 mg/m³ (respirable dust)

ACGIH TLV-STEL 10 mg/m³ (softwood total dust)

ACGIH TLV-TWA 1 mg/m³ (selected hardwood total dust (beech, oak, other))

Recommended Exposure Limits(1)

PEL-TWA 5 mg/m³ (softwood or hardwood total dust)

PEL-STEL 10 mg/m³ (softwood or hardwood total dust)

PEL-TWA 2.5 mg/m³ (Western red cedar total dust)

----- (1) See important footnote below
concerning OSHA PELs for wood dust

Information on Cellulose

Chemical Name: Cellulose
CAS#: 9004-34-6
ACGIH TLV 5.0mg/Cubic Meter
OSHA PEL TWA 10mg/Cubic Meter (Total Dust, Hardwoods)(•)
ACGIH TVL -TWA: 1.0 mg/m³ (certain hardwoods)
5.0 mg/m³ (respirable fraction)

Hazardous Ingredients: Cellulose
WT %: 100%
CAS #: 9004-34-6
EINECS #: 232-674-9
RTECS #.: FJ5691460
Hazard Classification: (Xn) Harmful
Risk Phrases: R2, R36/37/38, R45
CHEMICAL FORMULA: C₆H₁₀O₅

Balance of other ingredients is less than 1% in concentration (or .1% for carcinogens, reproductive toxins, or respiratory sensitizers).

GENERALLY APPLICABLE CONTROL MEASURES AND PROTECTIVE EQUIPMENT:

- Ventilation: Provide adequate general and local exhaust ventilation to maintain healthful working conditions.
- Keep formation of dust to a minimum
- Wear goggles or safety glasses. Other protective equipment such as gloves and approved dust respirators may be needed depending upon dust conditions.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I(beginning at 1910.132) or equivalent standard of

Canada, or standards of EU Member States (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State Standards, Canadian CSA Standard Z94.4-93, the European Standard EN 149, or EU Member States.

EYE PROTECTION: When engaged in activities where ingredients could contact the eye, wear safety glasses or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working in extremely dusty environments. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN 166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Use gloves when handling this product to reduce skin contact as appropriate. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate for the task (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

(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 PEL's for wood dust that OSHA had established at the time. The 1989 PELs were: TWA-5.0 mg/m³; STEL (15 min)-10.0 mg/m³ (all soft 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 Regulate(PNOR) or Inert or Nuisance Dust categories at PEL's 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 PEL's.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance and Odor: | Light to dark colored granular solid. Color and odor are dependent on the wood species and length of time since dust was generated. |
| Odor Threshold: | Not applicable |
| pH: | Not applicable |
| Melting Point/ Freezing Point: | Not applicable |
| Initial Boiling Point(@760MM Hg) | 329 Degrees Fahrenheit (165 Degrees Centigrade) |
| Flash Point: | Not applicable |
| Evaporation Rate (Butyl Acetate=1): | Not applicable |
| Flammability: | Combustible Solid |
| Explosive Limits: | 40 g / m ³ - LEL |
| Vapor Pressure: | Not applicable |
| Vapor Density: | Not applicable |
| Relative Density: | Not applicable |
| Solubility in H₂O (% by Weight): | Insoluble |
| Partition Coefficient (n-octanol/water): | No Data Available |
| Auto-Ignition Temperature: | As low as 212 Degrees Fahrenheit |
| Decomposition Temperature: | 500-518 Degrees Fahrenheit |

Viscosity: Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: None reported for Wood Flour/Wood Dust. (Cellulose can be reactive to Water Bromine Pentafluoride Sodium Nitrate Fluorine Strong Oxidizers)

Chemical Stability: Stable under normal conditions

Possibility of Hazardous Reactions: Will not occur

Conditions to Avoid: Incompatible Material, Ignition Sources

Incompatible Materials: Avoid contact with oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperatures in excess of 212o F.

Hazardous Decomposition Products: Thermal oxidative degradation of wood produces irritating and toxic fumes and gases, including CO, aldehydes and organic acids.

SECTION 11 - TOXICOLOGICAL INFORMATION

No formal data exists for Wood Flour or Wood Dust. Detailed information for the ingredient Cellulose can be found at the following website; <http://www.cdc.gov/niosh-rtecs/EJ56D844.html> Source: NIOSH (National Institute for Occupational Safety and Health). NIOSH information for Cellulose Standards and Regulation, Documentation and Surveillance, Status in Federal Agencies, and References is listed below.

HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ACUTE:

-INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting and malaise.

-SKIN: Contact may cause irritation. Various species of wood dust can cause allergic contact dermatitis in sensitized individuals.

-EYES: Contact may cause irritation and discomfort.

-INGESTION: Not a normal route of entry for this material.

NOTE: Wood Dust may aggravate pre-existing respiratory conditions or allergies.

CHRONIC:

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 para nasal 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.

SECTION 12 - ECOLOGICAL INFORMATION

All work practices must be aimed at eliminating environmental contamination.

There is no data available regarding the chemical effect on plants, animals and aquatic life. There is no specific data available on this product regarding environmental stability.

Product is composed of natural and biodegradable components.

SECTION 13 - DISPOSAL CONSIDERATIONS

Preparing Wastes for Disposal: Waste Disposal must be in accordance with appropriate U.S. Federal, State, and local regulations; also those of Canada, Australia, EU Member States, and Japan if applicable.

SECTION 14 - TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation as follows...

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| UN Identification Number: | Not Applicable |
| UN Proper Shipping Name: | Non-Regulated Material |
| Transport Hazard Class: | Not Applicable |
| Packing Group: | Not Applicable |
| DOT Label(s) Required: | None Required |
| Marine Pollutant: | The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B). |
| Recommendations: | Dry fine materials best transported by bulk tanker or sealed bags. |

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA):

This product is not considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO):

This product is not considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

U.S. SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 pounds (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory or are exempted from listing.

OTHER U.S. FEDERAL REGULATIONS: None

CANADIAN REGULATIONS

CANADIAN DSL / NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory, or are exempted from listing.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: Wood Dust, Wood Flour, or Cellulose are not listed.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: This is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS). Labeling is not required.

OTHER CANADIAN REGULATIONS: Not Applicable

EUROPEAN ECONOMIC COMMUNITY INFORMATION

EU LABELING AND CLASSIFICATION: This product meets the definition of the following hazard class as defined by the **European Economic Community Guidelines**.

EU CLASSIFICATION: [Xn] Harmful

EU RISK PHRASES: R2: Risk of explosion by shock, fire or other sources of ignition.
R36/37/38: Irritating to eyes, respiratory system and skin.
R45: May cause cancer.

EU SAFETY PHRASES: S16: Keep away from sources of ignition.
S22: Do not breath dust.
S24/25: Avoid contact with skin and eyes.
S51: Use only in a well ventilated area.

AUSTRALIAN INFORMATION FOR PRODUCT

The components of this product are listed on the International Chemical Inventory List.

JAPANESE INFORMATION FOR PRODUCT

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

JAPANESE ENCS INVENTORY: The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

INTERNATIONAL CHEMICAL INVENTORIES

Listing of the components on individual country Chemical Inventories is as follows:

ASIA-PAC: Listed

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS): Listed

KOREAN EXISTING CHEMICALS LIST (ECL): Listed

JAPANESE EXISTING NATIONAL INVENTORY OF CHEMICAL SUBSTANCES (ENCS): Listed

PHILIPPINES INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES (PICCS): Listed

SWISS GIFTLISTE LIST OF TOXIC SUBSTANCES: Listed

U.S. TSCA: Listed

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| SECTION 16 - OTHER INFORMATION |
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Safety Data Sheet Version Number: Version 1.1

IMPORTANT: The information that is presented in this SDS is believed to be accurate, but is not warranted to be so. It has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Users are advised to confirm in advance of the need that information is current, applicable, and suited to the circumstances of use. the manufacture makes no warranty of any kind, express or implied, concerning the accuracy or completeness of the information and data herein. The manufacture will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete, or otherwise misleading. the manufacture assumes no responsibility for injury to vendee or third party person caused by the material if reasonable safety procedures are not adhered to as stipulated in this Safety Data Sheet. Furthermore, the manufacture assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.