Safety Data Sheet

Wood Dust

1. Identification

TRADE NAME (AS LABELED):	Wood Dust
SYNONYMS:	Saw Dust, Wood Waste
PRODUCT USES:	Dust generated from sawing, sanding, or machining of untreated wood and wood products including timber.
CHEMICAL NAME/CLASS:	Process by-product.
MANUFACTURER'S NAME:	WestRock
ADDRESS:	504 Thrasher Street Norcross, GA 30071
EMERGENCY PHONE:	(800) 424-9300 (CHEMTREC)
BUSINESS PHONE:	770-448-2193

2. Hazard Identification /Labeling Information

Signal Word: DANGER

NOTE: This product may become hazardous as the result of downstream activities (e.g. cutting, processing) which creates small particles. If the material is in dust form as shipped then the product may produce hazardous airborne levels of wood dust while being transported or handled by downstream users, creating potential hazards as described below:

GHS Classification/Category	Hazard Statement(s)	Pictogram(s)
HEALTH Carcinogen- Category 1A Respiratory Sensitization – Category 1	 Dusts may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation May cause allergy or asthma symptoms or breathing difficulties if inhaled	

Skin Sensitization – Category 1 Specific Target Organ Toxicity- Single Exposure (STOT) Category-3	May cause an allergic skin reaction May cause respiratory irritation	
Eye Irritation Category 2B	Causes eye irritation	None
OTHER CLASSIFICATIONS Combustible Dust (OSHA Defined Hazard)	If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air	None

Precautionary Statements:

Prevention Statements**:**

- Take precautionary measures against static discharge.
- Avoid breathing dust.
- Take off contaminated clothing and wash before reuse.
- In case of inadequate ventilation wear an approved respirator suitable for conditions of use.

Response Statements:

- If inhaled and breathing is difficult, remove person to fresh air and keep comfortable for breathing.
- If experiencing respiratory symptoms, following removal to fresh air, call a Doctor or other qualified medical professional.
- Wear appropriate protective equipment for skin exposure.
- If on skin wash with plenty of soap and water.
- If skin irritation or rash occurs get medical advice/attention.
- If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so.

Disposal:

- Dispose of in accordance with Federal, state and local regulations.

Signs and Symptoms of Exposure:

Acute Health Hazards: 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 and wheezing as a result of inhalation.

Delayed Health Hazards: Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

Ingredients of Unknown Acute Toxicity (>1%): Not applicable.

3. Composition/Information on Ingredients

Component	CAS#	EC#	Wt %
Wood Dust	None	None	99-100

4. First-Aid Measures

Ingestion: Not applicable under normal use.
Eye Contact: Wood dust may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particles. Seek medical help if irritation persists.
Skin Contact: Wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in erythema and hives. Seek medical help if rash, irritation or dermatitis persists.
Skin Absorption: Not known to occur under normal use.
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. Seek medical help if persistent irritation, severe coughing or breathing difficulty occurs.
Acute Symptoms/Effects - Wood dust may cause mechanical irritation of the respiratory system. Wood dust can cause physical obstructions in the nasal passages, resulting in dryness of nose, dry cough, and sneezing. Wood dust may cause mechanical irritation of the eyes. Some species of wood may cause respiratory and skin sensitization.
Delayed Symptoms/Effects - Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.
Note to Physician: None

5. Fire-fighting Measures

Extinguishing Media and Restrictions: Water, carbon dioxide and sand.
Autoignition Temperature: Variable [typically 400°-500°F (204°-260°C)]
Specific Hazards, Anticipated Combustion Products: Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, carbon dioxide, aliphatic aldehydes, terpenes, and polycyclic aromatic hydrocarbons.
Special Firefighting Procedures: No special equipment anticipated.
Unusual Fire and Explosion Hazards: Unusual Fire and Explosion Hazards: Depending on moisture content and more importantly, particle diameter and airborne concentration, wood dust may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards 654 and 664 and the NFPA *Fire Protection Handbook* for guidance. Ventilation systems should be kept clean and precautions should be taken to prevent sparks or other ignition sources.
NFPA Rating (Scale 0-4): Health = 2 **Fire =** 1 **Reactivity =** 0

6. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of dried wood dust on exposed surfaces. Wear appropriate personal protective equipment for significant exposures (see section 8 below). Dried wood dust may pose a combustible dust hazard. Place recovered wood dust in a container for proper disposal.

7. Handling and Storage

Precautions to be Taken In Handling and Storage: Dried wood dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. Store in well-ventilated, cool, dry place away from open flame. Avoid contact with oxidizing agents and drying oils.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Wood (wood dust, softwood or hardwood)	None	99-100	OSHA	PEL-TWA 15 mg/m^3 (see footnote [A] below)	Total dust (PNOR)
			OSHA	PEL-TWA 5 mg/m^3 (see footnote [A] below)	Respirable dust fraction (PNOR)
			ACGIH	TLV-TWA 0.5 mg/m^3	Inhalable fraction, Western Red Cedar
			ACGIH	TLV-TWA 1 mg/m^3	Inhalable fraction, All other species

[A] 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 that time. The 1989 vacated PEL's were: 5 mg/m^3 PEL-TWA and 10 mg/m^3 STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), which is also referred to as "nuisance dust". However, some states have regulated wood dust PEL's in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances.

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use NIOSH approved filtering face piece respirator ("dust mask") or higher levels of respiratory protection as indicated if there is a potential to exceed the exposure limits or for symptom relief or worker comfort. Use respiratory protection in accordance with regulatory requirements such as the OSHA respiratory protection standard 29 CFR 1910.134 following a determination of risk from potential exposures.

EYE PROTECTION – Approved goggles or tight fitting safety glasses are recommended when excessive exposures to dust may occur (e.g. during clean up) and when eye irritation may occur.

PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to minimize potential slivers or mechanical irritation from handling materials.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.

WORK/HYGIENE PRACTICES – Follow good hygienic and housekeeping practices. Clean up areas where wood dust settles to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne-dust concentrations.

8. Exposure Control Measures/Personal Protection (cont'd.)

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of wood dust within the system. See "SPECIAL" section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

MECHANICAL (GENERAL) – Provide general ventilation in processing and storage areas so that exposure limits are met.

SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling this material contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.

OTHER – NA

9. Physical/Chemical Properties

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

Auto-ignition temperature:	Variable [typically 400°-500°F (204°-260°C)]
Boiling Point (@ 760 mm Hg):	Not applicable
Decomposition temperature:	Not available
Evaporation Rate (Butyl Acetate = 1):	Not applicable
Freezing Point:	Not applicable
Flash Point:	Not available
Flammability:	Not available
Melting Point:	Not applicable
Partition Coefficient (n-octonal/water):	Not applicable
Odor Threshold:	Not available
pH:	Not applicable
Solubility in Water (% by weight):	Not soluble
Specific Gravity (H_2O = 1):	Variable; depends on wood species and moisture
Upper/Lower Explosive Limits:	Not available
Vapor Density (air = 1; 1 atm):	Not applicable
Relative Density:	Not applicable
Vapor Pressure (mm Hg):	Not applicable
Viscosity:	Not applicable

10. Stability and Reactivity

Stability: ☐ Unstable ☒ Stable

Conditions to Avoid: Avoid all sources of ignition.

Incompatibility (Materials to Avoid): Avoid contact with oxidizing agents and drying oils.

Hazardous Decomposition or By-Products: Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, carbon dioxide, aliphatic aldehydes, resin acids, terpenes, and polycyclic aromatic hydrocarbons.

Hazardous Polymerization: ☐ May occur ☒ will not occur

Sensitivity to Mechanical Impact: Not applicable

Sensitivity to Static Discharge: May cause explosion if in critical concentrations and conditions.

11. Toxicological Information

Acute Toxicity:
Wood dust (softwood or hardwood)
Wood dust may cause nasal dryness, irritation, coughing and sinusitis. NTP and IARC classify wood dust as a human carcinogen (IARC Group 1). See Section 2 above.
Carcinogenicity:
IARC: Wood dust, Group 1 - carcinogenic to humans.
NTP: Wood dust - known human carcinogen.
OSHA: Not listed by OSHA.
Target Organs/Routes of Exposure: Eyes, skin, respiratory system.
Acute Health Hazards: 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 and wheezing as a result of inhalation.
Chronic Health Hazards: Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels.
Reproductive effects: No information available.
Teratogenic effects: No information available.
Mutagenic effects: No information available.
Effects: Wood dust may cause skin, respiratory system and eye irritation.

12. Ecological Information

Environmental Fate: Wood wastes would be expected to be biodegradable.
Environmental Toxicity: No information available.

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. Follow all applicable federal, state, and local regulations for disposal.

14. Transport Information

Mode: (Air, Land, water) 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) regulations.

Proper Shipping Name:	NA
Hazard Class:	NA
UN/NA ID Number:	NA
Hazard Zone:	NA
Packing Group:	NA
Label/Placard Required:	NA

15. Regulatory Information

CERCLA: Wood dust is not listed as a CERCLA hazardous substance.

15. Regulatory Information (cont'd.)

OSHA: Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood dust generated by sawing, sanding or machining activities may be considered hazardous.

STATE RIGHT-TO-KNOW:

California Prop 65: **Warning:** Wood dust is a substance known to the State of California to cause cancer.

Pennsylvania – Wood dust appear on Pennsylvania's Appendix a, Hazardous Substance List.

SARA 313 Information: This product does not contain any chemical ingredients that exceed the threshold reporting levels established by SARA Title III, section 313 and 40 CFR section 372.

SARA 311/312 Hazard Category: This product has been reviewed according the EPA "Hazard Categories: promulgated under SARA Title III, Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

An immediate (acute) health hazard	Yes
A delayed (chronic) health hazard	Yes
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

16. Additional Information

Date Prepared: 5/27/2015
Date Revised: 6/29/2015
Prepared By: WestRock Safety and Health Department.
WestRock SDS available on: www.westrock.com
Disclaimer:

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Definition of Common Terms:

ACGIH	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
CERCLA	=	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	=	U. S. Department of Transportation
DSL	=	Domestic Substance List
EC50	=	Effective concentration that inhibits the endpoint to 50% of control population
ENCS	=	Japanese Existing and New Chemical Substances List
EPA	=	U.S. Environmental Protection Agency
HMIS	=	Hazardous Materials Identification System

16. Additional Information (cont'd.)

IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association
IMDG	=	International Maritime Dangerous Goods
LC50	=	Concentration in Air Resulting in Death To 50% of Experimental Animals
LCLo	=	Lowest Concentration in Air Resulting in Death
LD50	=	Administered Dose Resulting in Death to 50% of Experimental Animals
LDLo	=	Lowest Dose Resulting in Death
LEL	=	Lower Explosive Limit
LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NIOSH	=	National Institute for Occupational Safety and Health
NFPA	=	National Fire Protection Association
NPRI	=	(Canada) National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
PNOR	=	Particulate Not Otherwise Regulated
PNOS	=	Particulate Not Otherwise Specified
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest Concentration in Air Resulting in a Toxic Effect
TDG	=	(Canada) 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	=	(Canada) Workplace Hazardous Materials Information System

Wood Dust

TRADE NAME (AS LABELED): Saw Dust, Wood Waste

Danger

Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation. May cause respiratory and skin sensitization and eye irritation.
May Form Combustible Dust Concentrations in Air if Small Particles Exist or Are Formed During Processing or Handling

PRECAUTIONS: Avoid breathing dust and wear appropriate protective equipment for respiratory, skin or eye exposures. Prevent dust release and accumulations to minimize hazard**s. Take off contaminated clothing and wash before reuse.** Keep dust away from ignition sources such as heat, sparks, and flame.
FIRST-AID/RESPONSE: If on skin wash with plenty of mild soap and water. If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so. If experiencing respiratory symptoms, skin irritation or rash, call a Doctor or other qualified medical professional.

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