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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WOOD DUST
 (Untreated/Uncompressed)

SUPPLIER/MANUFACTURER:
 West Fraser

Synonyms: Finely divided wood particles, powdered wood, sawdust, wood shavings
Product Description: Mechanical or abrasive activities such as cutting, shaping, drilling, sanding or sawing conducted on untreated wood and untreated wood products can generate wood dust.
Product Use: A byproduct; not generated for specific use.
Preparation Date: March 25, 2013

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Name	CAS#	%	Agency	Exposure Limit	Comment
Wood Dust (Softwood and Hard Woods Excluding Western Red Cedar)	None	100	Alberta 8 Hr. OEL ACGIH TLV* OSHA PEL OSHA PEL	5 mg/m ³ 1 mg/m ³ 15 mg/m ³ 5 mg/m ³	Total Fraction Inhalable Fraction Total Fraction Respirable Fraction
Wood Dust (Western Red Cedar)	None	100	Alberta 8 Hr. OEL ACGIH TLV* OSHA PEL OSHA PEL	0.5 mg/m ³ 0.5 mg/m ³ 15 mg/m ³ 5 mg/m ³	Total Fraction Inhalable Fraction Total Fraction Respirable Fraction

* - Taken from the ACGIH 2012 Threshold Limit Value & Biological Exposure Indices booklet
 Wood dust is primarily composed of cellulose, hemicellulose and lignin. There are also several compounds (mostly organic) known as wood extractives.

SECTION 3 - HAZARDS IDENTIFICATION

Exposure Routes: Inhalation, skin and eye contact.

Inhalation: Causes irritation and sensitization

Inhalation of wood dust may irritate the respiratory tract by causing: drying of the mucus, sneezing, irritating cough and expectoration. May cause some difficulty in breathing such as: bronchitis, nasal discharge, respiratory tract obstruction and more. May sensitize the respiratory system and cause asthmatic symptoms and signs. People with existing respiratory tract ailments, should avoid exposures to wood dust as they may suffer severe irritation and difficulty in breathing.

Skin Contact: Causes irritation and sensitization

Dermatitis has been reported in humans, nature of wood and origin of the dust has to be taken into consideration.

Skin Absorption: NAP

Eye Contact: Causes irritation

Conjunctivitis has been reported in humans, nature of the wood and origin of the dust has to be taken into consideration.

Ingestion: Not expected under normal use.

Effects of Chronic Exposure: Exposure to wood dust may cause asthmatic symptoms and signs. Chronic exposure to some species of wood and sensitivity of some worker's may cause the outbreak of some allergies that can become a potential health hazard to these individuals.

SECTION 4 - FIRST AID MEASURES

Inhalation: Move worker at once to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and get medical attention.

Skin Contact: Wash skin with soap or mild detergent and water, or flush affected area with water for a few minutes. If irritation persists, get medical attention.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, holding eyelids apart to ensure flushing of each entire eye. If irritation persists, get medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: NAP

Auto-ignition Temperature: Variable*(~ 400-500°F/204 - 260° C)

Flammable Limits: LEL: 40 grams/m³* UEL: Variable*

*The auto-ignition temperature, lower explosive limit and upper explosive limits for wood dust vary with exact composition, particle size, moisture level and rate of heating and dust concentration.

Extinguishing Media: Use dry chemical, carbon dioxide, water spray, or foam. For large fires, use water spray, fog or alcohol foam. Use of carbon dioxide extinguishers is not recommended for Class "A" fires.

Hazardous Combustion Products: Mostly carbon oxides, but wood is also known to release polycyclic aromatic hydrocarbons and aldehydes.

Fire and Explosion Hazards: Mechanical or abrasive activities which produce wood dust as a by-product may present a severe explosion hazard if a dust cloud contacts an ignition source. Wood dust may explode when in contact with strong acids and oxidants.

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. Self-contained breathing apparatus (SCBA) is recommended when fighting fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures: Wood dust should be cleaned up frequently. To avoid dispersing the dusts in air, scoop up into containers or vacuum with an appropriate filter. Do not use compressed air for cleaning. Damp mop any residue. Place recovered wood dust in a container for proper disposal.

SECTION 7 - HANDLING AND STORAGE

Handling Procedures: Avoid any source of heat and any activities that could generate "clouds" of wood dust which can be a source of fire and explosion.

Storage Requirements: If wood dust is stored while awaiting disposal, keep in a cool area away from heat, ignition sources and oxidizing materials; self heating may occur if material is damp.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls: Enclose processes where possible to prevent dust dispersion into the workplace. Provide general or local ventilation systems to maintain airborne concentrations of wood dust below applicable provincial or federal standards. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source. To avoid static sparks, electrically ground and bond all equipment used in and around processes that involve wood dust generation.

Administrative Controls: Consider preplacement and periodic medical exams of exposed workers with emphasis on the eye, skin and respiratory tract.

Respiratory Protection: Wear respirators approved by NIOSH for protection against dust where airborne concentrations exceed legislated exposure limits.

Protective Clothing/Equipment: Wear protective gloves, boots, coveralls, aprons and gauntlets to prevent prolonged or repeated skin contact. Use suitable eye protection in dusty environments.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Typical State:	Solid
Boiling Point:	NAP
Specific Gravity:	Variable (Dependent on wood species and moisture content.)
Vapor Pressure:	NAP
Melting Point:	NAP
Vapor Density:	NAP
Solubility in H₂O: (% By Wt.)	Variable
Evaporation Rate: (Butyl Acetate=1)	NAP
% Volatiles By Vol.:	Variable

Appearance and Odor: Light to dark colored granular solid. Color and odor are dependent on the wood species and time since dust was generated.

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: May become unstable and ignite spontaneously when stored in hot and humid areas, or when the product is partially burned or carbonized.

Incompatibility: Avoid contact with oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperatures in excess of 400°F/200°C.

Hazardous Decomposition Products: Thermal decomposition from 392 - 932 deg. F (200 - 500 deg C) will result in the following: water, carbon dioxide, formic acid, acetic acid, carbon monoxide, inflammable vapors (methane), wood coal and aldehydes.

Hazardous Polymerization: NAP

SECTION 11 - TOXICOLOGY INFORMATION

LD50/LC50: Not available.

Carcinogenicity: IARC: Category 1, 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 of 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. Additionally, while IARC does not differentiate between soft and hard woods they were not able to conclusively find that softwood exposure had the same effect as hardwood exposure.

ACGIH: Western Red Cedar – A4, Not classifiable as a human carcinogen; Oak and Beech – A1, confirmed human carcinogen; Birch, Mahogany, Teak and Walnut – A2, suspected human carcinogen; all other wood dusts A4. ACGIH also indicates that Western Red Cedar is a sensitizer.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: Exposure to wood dust may cause cellular changes in the nasal epithelium.

SECTION 12 - ECOLOGICAL INFORMATION

Not Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Dry land disposal is acceptable in most states. It is however the user's responsibility to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste material should be packaged, labeled, transported and disposed of, or reclaimed in accordance with local, state, provincial and federal regulations.

SECTION 14 - TRANSPORT INFORMATION

US DOT: Not Applicable

WHMIS: Not Applicable

CANADA TDG: Not Applicable

IATA, ICAO, IMO, SARA III: Not Applicable

SECTION 15 - REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16 - OTHER INFORMATION

The information contained in this material safety data sheet has been compiled from sources believed to be accurate and reliable and otherwise technically correct. It is the user's responsibility to determine if this information is suitable for their applications and to follow safety precautions as may be necessary in all circumstances. This material safety data sheet does not create a warranty of any kind concerning the accuracy or completeness of the information contained herein and the issuer, hereof, will not be liable for claims relating to any party's use or reliance on this information however based. The user has the responsibility to ensure that this material safety data sheet is the most up-to-date issue. It is the responsibility of the user to comply with any local, state and federal regulations concerning use of this product. It is the responsibility of the buyer to research and understand safe methods of storing, handling and disposing of this product.

Additional information can be found in the RTECS database under RTECS#: ZC9850000

Common Abbreviations:

ACGIH.....American Conference of Governmental Industrial Hygienists
CAS No.....Chemical Abstracts System Number
IARC.....International Agency for Research on Cancer
NAP.....Not Applicable
NIOSH.....National Institute for Occupational Safety and Health

NTP.....National Toxicology Program
OSHA.....Occupational Safety and Health Administration
PEL.....Permissible Exposure Limit
RCRA.....Resource Conservation and Recovery Act
RTECSNIOSH Registry of Toxic Effects of Compounds and Substances
STEL.....Short Term Exposure Limit (15 min.)
TLV.....Threshold Limit Value
TWA.....Time Weighted Average (8 hours)