

Materials Safety Data Sheet



1. Product Identification

Product	Company Identification
JSI (Wooden I-Joist)	Jager Engineered Wood Products Ltd. 4334 68th Ave SE Calgary, Alberta, Canada Emergency number: 403-254-4961

2. Hazardous Ingredients/ Identity Information

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Wood	None	90 - 99	OSHA	PEL-TWA 15 mg/m ³	Total dust
			OSHA	PEL-TWA 5 mg/m ³	Respirable dust fraction
			ACGIH	PEL-TWA 1 mg/m ³	Inhalable fraction
			ACGIH	TLV-STEL 10 mg/m ³	Softwood total dust
			ACGIH	PEL-TWA 0.5 mg/m ³	Western red cedar Inhalable fraction
			NIOSH REL	REL-TWA 1 mg/m ³	Inhalable fraction
Resin Solids: Phenol Formaldehyde		1 - 15	OSHA	PEL-TWA 0.75 ppm	Free gaseous formaldehyde
			OSHA	PEL-STEL 2.0 ppm	Free gaseous formaldehyde
			ACGIH	TLV-Ceiling 0.3 ppm	Free gaseous formaldehyde
Paraffin Wax		< 1	OSHA	PEL-TWA 2 mg/m ³	Paraffin wax fume
			ACGIH	TLV-TWA 2 mg/m ³	Paraffin wax fume

1. 1989 OSHA PEL: In 1992, the U.S. Court of Appeals for the Eleventh Circuit Court overturned OSHA's 1989 Air Contaminants Rule, which included specific PELs for wood dust established by OSHA at that time. Wood dust is now officially regulated as an organic dust in a category known as "Particulates Not Otherwise Regulated" (PNOR), or Nuisance Dust. However, a number of states have incorporated the OSHA PELs from 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.
2. NIOSH REL: The National Institute for Occupational Safety and Health has established a recommended exposure limit (REL) for wood dust, all soft and hardwoods, except western red cedar of 1 mg/m³ as a TWA for up to 10- hour workday and a 40-hour workweek.
3. This product contains less than 0.05% free formaldehyde

3. Hazard Identifications

Appearance and Odour: Wood Dust consists of finely divided wood particles generated from sawing, sanding, routing, or chipping solid dimensional lumber or other wood products. Wood chips are similar to wood dust but coarser. The products have a slight aromatic odour. The wood component may consist of fir, hemlock, pine, and spruce.

Oriented Strand Board consists of a ligno cellulosic matrix of interlocking wood flakes having a slightly aromatic odour. The wood component of this products may consist of alder, aspen, beech, birch, cottonwood, fir, gum, hemlock, hickory, maple, oak, pecan, pine, black poplar, spruce, walnut and/or Western red cedar.

Primary Health Hazards: The primary health hazard posed by these products is thought to be due to exposure to wood dust.

Primary Route(s) of Exposure:

- () Ingestion:
- (x) Skin: Dust
- (x) Inhalation: Dust

Medical Conditions Generally Aggravated by Exposure: Wood dust may aggravate pre-existing respiratory conditions or allergies.

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. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer.

Carcinogenicity Listing:

- () NTP: Not listed
- (X) IARC Monographs: Wood dust, Group 1
- (X) OSHA Regulated: Formaldehyde gas

IARC - Group 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 haematopoietic systems, stomach, colon or rectum.

4. Emergency and First Aid Procedures

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. Get medical help if irritation persists.

Skin Contact: In sensitized individuals, wood dust of certain species can elicit allergic contact dermatitis, as well as mechanical irritation resulting in erythema and hives. Get 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. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

5. Fire and Explosive Data

Flash Point (Method Used): NAP

Flammable Limits:

- LEL: See below under "Unusual Fire and Explosion Hazards"
- UEL: NAP

Extinguishing Media: Water, carbon dioxide, sand.

Auto ignition Temperature: Variable [typically 400-500° F (204-260° C)].

5. Fire and Explosive Data (cont.)

Special Firefighting Procedures:

OSB: None.

Wood Dust: Use water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into the air. Remove burned, charred or wet dust to open, secure area after fire is extinguished.

Unusual Fire and Explosion Hazards: Depending on moisture content and more importantly, particle diameter, wood dust may explode in the presence of an ignition source. An airborne dust concentration of 40 g/m³ (40,000 mg/m³) is often used as the LEL for wood dusts.

6. Accidental Release Measures

Steps to Be Taken in Case Material Is Released or Spilled: Not applicable for products in purchased form. Wood dust generated from sawing, sanding, drilling or routing of these products may be vacuumed or shovelled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH/MSHA-approved respirator and goggles where ventilation is not possible and the allowable exposure limits may be exceeded.

7. Handling and Storage

Precautions to Be Taken in Handling and Storage:

OSB: This product may release very small quantities of formaldehyde in gaseous form. In foreseeable conditions of use, this product releases less than 0.05 ppm in standard large chamber test conditions. Store in well-ventilated, cool, dry place away from open flame.

Wood Dust: No special handling precautions are required. Keep in well-ventilated, cool, dry place away from open flame.

Other Precautions: A NIOSH/MSHA-approved respirator and goggles should be worn when the allowable exposure limits may be exceeded. Avoid open flame contact with oxidizing agents and drying oils.

8. Exposure Control Measures

Personal Protective Equipment:

Respiratory Protection: Not applicable for products in purchased form. A NIOSH/MSHA approved respirator is recommended when allowable exposure limits may be exceeded.

Protective Gloves: Not required. However, cloth, canvas or leather gloves are recommended to minimize potential mechanical irritation from handling product.

Eye Protection: Not applicable for product in purchased form. Goggles or safety glasses are recommended when machining these products and in areas of high dust levels.

Other Protective Clothing or Equipment: Not applicable for product in purchased form. Outer garments 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 blow-down and other practices that generate high airborne-dust concentrations.

Ventilation:

Local Exhaust: Provide local exhaust as needed so that exposure limits are met.

Mechanical (General): Provide general ventilation in processing and storage areas so that exposure limits are met.

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

Other: NAP

9. Physical / Chemical Properties

Wood Dust: Boiling point (@ 760 mmHg):	NAP	Solubility in water (% by weight):	< 0.1
OSB: Boiling point (1 ATM):	NAP	Wood Dust: % volatile by volume [@ 70° F (21° C)]:	0
Vapor pressure (mmHg):	NAP	OSB: % volatile by volume:	0
Vapor density (air = 1; 1 atm):	NAP	pH:	NAP
Specific gravity (H2O = 1):	0.40 - 0.80	Oil-water distribution coefficient:	NAP
Melting point:	NAP	Odour threshold:	ND
Evaporation rate (butyl acetate = 1):	NAP		

10. Stability and Reactivity

Stability: () Unstable (x) Stable

Conditions to Avoid: Water, combustibles, heat, ignition sources, and other compatibles. Avoid open flame.

Incompatibility (Materials to Avoid): Avoid contact with oxidizing agents and drying oils. Product may ignite at temperatures over 400° F (204° C).

Hazardous Decomposition or By-Products: Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, rosin acids, terpenes and polycyclic aromatic hydrocarbons.

Hazardous Polymerization: () May occur (x) Will not occur

Sensitivity to Mechanical Impact: NAP

Sensitivity to Static Discharge: NAP

11. Toxicological Information

None available for product in purchased form. Individual component information is listed below if available.

Wood dust (softwood or hardwood) OSHA Hazard Rating = 3.3; moderately toxic with probable oral lethal dose to humans being 0.5 - 5 g/kg (about 0.08 - 1 pound for a 70 kg or 150 pound person.)

Source: *OSHA Regulated Hazardous Substances*, Government Institutes, Inc., February 1990.

12. Ecological Information

No information available at this time.

13. Disposal Consideration

Waste Disposal Method: If disposed of or discarded in its purchased form, incineration is preferable. Dry land disposal is acceptable in most states/provinces. It is, however, the user's responsibility to determine at the time of disposal whether your product meets RCRA criteria for hazardous waste. Follow applicable federal, state, local and provincial regulations.

14. Transportation Information

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.

15. Regulatory Information

U.S. Federal Regulations: This product is not controlled under the U.S. Hazard Communication Rule (29 CFR 1900.1200)

Canadian Regulations: This is not a WHMIS controlled product. It has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Other Regulations: Not Available

16. Additional Information

Date Prepared: 08/26/94

Date Revised: 01/30/10

Revised By: Vice President Operations

User's Responsibility: The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine whether this information is suitable for their applications and to follow safety precautions as necessary. The user has the responsibility to make sure that this sheet is the most up-to-date issue.

Definition of Common Terms:

ACGIH	American Conference of Governmental Industrial Hygienists
C	Ceiling Limit
CAS#	Chemical Abstracts Service Registry Number
DSL	Canadian Domestic Substance List
EPA	U.S. Environmental Protection Agency
IARC	International Agency for Research on Cancer
LCLo	Lowest concentration in air resulting in death
LC50	Concentration in air resulting in death to 50% of experimental animals
LDLo	Lowest dose resulting in death
LD50	Administered dose resulting in death to 50% of experimental animals
MSHA	Mining Safety and Health Administration
ND	Not Determined
NAP	Not Applicable
NAV	Not Available
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
STEL	Short-Term Exposure Limit (15 minutes)
TCLo	Lowest concentration in air resulting in a toxic effect
TDG	Canadian Transportation of Dangerous Goods
TDL0	Lowest dose resulting in a toxic effect
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time-Weighted Average (8 hours)
WHMIS	Workplace Hazardous Materials Information System