

Material Safety Data Sheet



Wood I-Joist (Not Preservative Treated):

Particles may be generated by any manual or mechanical cutting or abrasion process performed on wood.

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1. Product Identification

Product	Manufacturing Location(s)
Red-I™ Joist (Not Preservative Treated)	USA: Stayton, OR

Synonyms: None

2. Hazardous Ingredients/Identity Information

Name	CAS#	%	Agency	Exposure Limits	Comments
Wood	None	91-95	OSHA OSHA ACGIH	PEL-TWA 15 mg/m ³ (see footnote ^A below) PEL-TWA 5 mg/m ³ (see footnote ^A below) TLV-TWA 1 mg/m ³	Total dust (PNOR) Respirable dust fraction (PNOR)
<u>Resin Solids:</u> Phenol formaldehyde ^{B, C}	9003-35-4	1-9	OSHA OSHA ACGIH	PEL-TWA 0.75 ppm PEL-STEL 2 ppm TLV-Ceiling 0.3 ppm	Free gaseous formaldehyde
Polymeric Diphenylmethane Diisocyanate ^{B, D}	9016-87-9	4-6	OSHA ACGIH	None None	
Paraffin wax ^B	8002-74-2	<1	OSHA ACGIH	PEL-TWA 2 mg/m ³ TLV-TWA 2 mg/m ³	Paraffin wax fume Paraffin wax fume

^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/m³ STEL (15 min)-10mg/m³ PEL-TWA (all softwood and hardwood except Western Red Cedar - Western Red Cedar; TWA 2.5 mg/m³. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), or Nuisance Dust. However, some states have incorporated the 1989 OSHA PELs in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances for noncompliance with the 1989 PELs.

^B The VOC content of adhesives and sealants used are equal or less than the current VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule #1168, AND all sealants used as fillers meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51.

^C These products may contain trace (<0.1%, wt %) amounts of free formaldehyde, which may be released depending on concentration and environmental conditions. These panels contain no urea-formaldehyde resins. Large scale chamber studies conducted by the APA Engineered Wood Association have shown that the finished products off gas levels below 0.1 ppm as well.

^D This ingredient is the polymerized form of MDI resin. There is no detectable MDI monomer in the product as purchased.

3. Hazard Identification

Exposure:

Routes of Entry:

- Ingestion
- Skin
- Inhalation
- Eye

Signs & Symptoms

Not Likely
Rash, persistent irritation, and dermatitis.
Respiratory irritation, nasal dryness, coughing, sneezing, and wheezing.
Irritation

Emergency & First Aid:

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 particle. Seek medical help if irritation persists.

SKIN CONTACT: Seek medical help if rash, irritation or dermatitis persists.

INHALATION: Remove to fresh air. Seek medical help if persistent irritation, severe coughing, allergic-type responses or breathing difficulty occurs.

Carcinogenicity Listing:

- NTP: Wood dust, Known Human Carcinogen. Formaldehyde, Reasonably Anticipated to be a Human Carcinogen.
- IARC Monographs: Wood dust, Group 1 carcinogenic to humans. Formaldehyde, Group 1 carcinogenic to humans.
- OSHA Regulated: Formaldehyde Gas

NTP: (Wood Dust) According to its Tenth Report on Carcinogens, NTP states, "Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans. An association between wood dust exposure and cancer of the nose has been observed in many case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Strong and consistent associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure."

IARC – Group 1: (Wood dust) 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.

IARC – Group 1: (Formaldehyde) Carcinogenic to Humans. A working group of IARC has determined that there is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries. However, numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer. Rats exposed to 14 ppm of formaldehyde for 24 months in the laboratory developed nasal cancer. Exposure of 6 ppm did not result in statistically significant levels of nasal cancer.

4. Fire and Explosion Data

Flash Point (Method Used): N/A

Flammable Limits: LFL = See "Unusual Fire and Explosion Hazards" below UFL = N/A

Extinguishing Media: Water, carbon dioxide, sand

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

Special Firefighting Procedures: None

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.

5. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Sweep up or vacuum up spills for recovery or disposal. Avoid creating dusty conditions whenever feasible. Assess situation and control potential explosion and exposure hazards. Place recovered wood dust in a container for proper disposal.

6. Handling and Storage

Precautions to be Taken In Handling and Storage: No special handling precautions are required for products in purchased form. Avoid repeated or prolonged breathing of wood dust. These products may release very small quantities of formaldehyde in gaseous form. Under foreseeable conditions of use, these products release less than 0.10 ppm in standard large chamber test conditions. Store in well-ventilated, cool, dry place away from open flame.

7. Exposure Control Measures, Personal Protection

Personal Protective Equipment:

RESPIRATORY PROTECTION – A NIOSH-approved filtering face piece respirator (“dust mask”) or higher level of particulate protection depending on concentration is recommended when exposure limits may be exceeded.

EYE PROTECTION –Goggles or safety glasses are recommended when excessive exposures to wood dust may occur (e.g. during clean up).

PROTECTIVE GLOVES – Not required. However, cloth, canvas, or leather gloves are recommended to minimize potential slivers or mechanical irritation from handling product.

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 blowdown or 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 – N/A

OTHER – N/A

8. Physical/Chemical Properties

Physical Description: Red-ITTM Joists consist of a ligno cellulosic matrix of interlocking wood fibers having a slightly aromatic odor.

Boiling Point (@ 760 mm Hg): N/A

Evaporation Rate (Butyl Acetate = 1): N/A

Melting Point: N/A

Solubility in Water (% by weight): Insoluble

Specific Gravity (H₂O = 1): Variable; depends on wood species and moisture

Vapor Density (air = 1; 1 atm): N/A

Vapor Pressure (mm Hg): N/A

9. Stability and Reactivity

Stability: Unstable Stable

Conditions to Avoid: Avoid open flame. Product may ignite at temperatures in excess of 400°F (204°C).

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

Hazardous Decomposition or By-Products: Spontaneous and rapid hazardous decomposition will not occur. 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

10. 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.

11. Additional Information

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 if the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to make sure that this MSDS is the most up-to-date issue.