

Material Safety Data Sheet

H2-F (Bifenthrin) Treated TJI Joist



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Statement of Hazardous Nature: In its intact state this product is not classified as a hazardous substance according to the criteria of Worksafe Australia.

Wood dust that may be generated by sawing or otherwise processing this product is classified as a hazardous substance according to the criteria of Worksafe Australia.

Important Notice: This Material Safety Data Sheet (MSDS) is issued by Trus Joist, A Weyerhaeuser Business, in accordance with Worksafe Australia guidelines. As such, the information contained within this document must not be altered, deleted or added to. Trus Joist will issue an updated MSDS when there is a change in product specifications and/or Worksafe regulations or guidelines. Trus Joist will not accept any responsibility for any changes made to its MSDS in content by any other person or organization.

1. Product Identification

Product Name	H2-F (Bifenthrin) Treated TJI® Joist
Other Synonyms	"H2-F Treated I-beam", "H2-F Treated I-joist", "Treated I-beam", "Treated I-joist"
Manufacturer's Product Code	TJI® /70 , TJI® /90
UN Number	None allocated
Dangerous Goods Class	None allocated
Subsidiary Risk	None allocated
Hazchem Code	None allocated
Poisons Schedule	None allocated
Major Recommended Use	H2-F (Bifenthrin) Treated TJI®-joists are predominantly used in floor and roof systems of residential construction South of the Tropic of Capricorn
Physical Description/ Properties	The product is blue in color (code requirement signifying treatment used and allowable geography for use). The blue may fade over time, especially with exposure to UV light.
Appearance	Wood flange and plywood web material is bonded together using an adhesive to create a wooden I-joist. Once the manufacturing process is complete, adhesives used to manufacture the plywood (Phenol-formaldehyde) and the I-joist (MDI) are fully cured. No detectable levels of isocyanate or formaldehyde are present in the product as purchased. H2-F (Bifenthrin) treated TJI® Joists will appear blue in color and bear an ink stamp describing treatment location, type and allowable end use.
Odour	Treated TJI® Joists may have a slight sweet smell, which will dissipate soon after treatment. When sawn, Treated TJI® Joists may have the odour of the wood species used in the raw materials.
Boiling Point (°C)	Not applicable
Melting Point (°C)	Not applicable
Vapour Pressure	Not applicable
Flash Point	Not applicable
Flammability Limits in Air	Not flammable under normal conditions of use. See "Fire and Explosion Hazard" section
Specific Gravity (water =1)	Variable; depends on wood species and moisture
pH (1% aqueous solution)	Not Applicable
Auto Ignition Temperature	Variable; typically 204–260° C

Ingredients:		
Substance/Chemical	CAS No.	Proportion by Weight (%)
Wood	None	90-99
Resin Solids: Phenol-formaldehyde ¹	9016-87-9	1-9
EPI - Emulsion polymer isocyanate (MDI) adhesive ²	None	<2
Bifenthrin ³	82657-04-3	<1

¹ This product contains less than 0.05% free formaldehyde when manufactured.

² This ingredient contains synthetic rubber emulsion and isocyanate. During the manufacturing process, the raw material is converted to urea and a urethane polymer. No detectable levels of isocyanate (MDI) are present in the product as purchased.

³ Bifenthrin is the active ingredient in a water-based insecticide solution used to treat TJI® Joist for protection against subterranean termite and borer damage. Bifenthrin is a synthetic pyrethroid insecticide and is contained in Treated TJI® Joist at a target level of 0.02% m/m.

2. Health Hazard Information

Health Effects:

Treated TJI® Joists in their manufactured form are not classified as hazardous. The primary health hazard posed by these products is thought to be due to exposure to wood dust created by sawing or otherwise machining the product. A comparatively minor health hazard is posed by the insecticide, Bifenthrin, with which these products are treated. Handling Treated TJI® Joists may result in splinters. See "Precautions for Use" section for methods to mitigate health effects.

The following health effects are based on current research and knowledge of Bifenthrin and wood dust created by sawing or otherwise processing wood fiber.

Acute Health Effects:

Swallowed:	Swallowing wood dust may result in abdominal discomfort.
Eye:	Wood dust may be irritating to the eyes causing discomfort and redness.
Skin:	Wood dust may irritate skin. Allergic contact dermatitis may occur. Bifenthrin may produce skin irritation in sensitive individuals, but should be transient.
Inhaled:	Wood dust may irritate the throat and lungs. Asthma may occur.

Chronic Effects:

Repeated inhalation of elevated levels of wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer. However, if the work practices noted in this MSDS are followed, and exposure to airborne dusts is kept low, no acute or chronic health effects are anticipated.

Wood dust is classified as a Group 1 carcinogen by IARC. Group 1 carcinogens are carcinogenic to humans, or there is 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.

Long-term studies on Bifenthrin showed that it was non-carcinogenic and that it did not cause reproductive toxicity or teratogenicity (malformations in the developing fetus).

First Aid:

Ingested	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. Bifenthrin may produce skin irritation in sensitive individuals, but should be transient. Remove any contaminated clothing and wash skin thoroughly with soap and water. Get medical help if rash, irritation, or dermatitis persists. If concerned, contact a doctor or the nearest Poisons Information Centre.

Inhaled	Wood dust may cause unpleasant obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing, or headaches. Remove to fresh air. Get medical help if persistent irritation, severe coughing, or breathing difficulty occurs.
Advice to Doctor	Treat symptomatically

3. Precautions for Use

Exposure Standards	<ul style="list-style-type: none"> • Wood Dust (softwood) <ul style="list-style-type: none"> • 5 mg/m³ time weighted average (TWA) measured as inspirable particulate • 10 mg/m³ short term exposure limit (STEL) • sensitizing to skin and respiratory tract • Bifenthrin <ul style="list-style-type: none"> • No exposure limit has been assigned to Bifenthrin by NOHSC Australia
Engineering Controls	All work with Treated TJI [®] Joists must be carried out in such a way as to minimize exposure to wood dust. Under factory conditions, sawing, drilling, or sanding of Treated TJI [®] Joists should be done with equipment fitted with local exhaust ventilation devices capable of removing dust at the source. Measures should be taken to eliminate the build up of static electricity.
Respiratory Protection	Avoid breathing sawdust from Treated TJI [®] Joists. Wear a P1 or P2 respirator suitable for particulate and conforming with Australian Standards AS/NZS 1715 and AS/NZS 1716 when exposed to dust. These standards should be followed in the selection, fit testing, use, and storage and maintenance of the respirators.
Skin Protection	Wear industrial impervious gloves (AS 2161) especially when handling product still wet after treatment, loose comfortable clothing and boots. Long-sleeved shirts and long trousers are recommended to prevent skin irritation. Wash skin with mild soap and water after working with Treated TJI [®] joists. Check regularly for holes and cracks in gloves and replace if necessary. Launder work clothes regularly and separately from other clothing.
Eye Protection	Non-fogging goggles or safety glasses (AS/NZS 1337) should be worn if there is a risk of wood dust getting into eyes.
Flammability	Not flammable under normal conditions of use, but is combustible and will sustain a fire.

4. Safe Handling Information

Precautions to Be Taken in Handling and Storage	<ul style="list-style-type: none"> • No special handling precautions are required for products in purchased form. Avoid repeated or prolonged breathing of wood dust. • The phenol-formaldehyde adhesive used to manufacture the plywood contained in this product may release very small quantities of formaldehyde in gaseous form. Under foreseeable conditions of use, these products release less than 0.050 ppm in standard large-chamber test conditions. • MDI adhesive releases no formaldehyde. Store in well-ventilated, cool, dry place away from open flame.
Spills and Disposal	<ul style="list-style-type: none"> • If disposed of or discarded in its purchased form, incineration is preferable. Dry land disposal is an acceptable alternate means of disposal. It is, however, the user's responsibility to follow applicable regulations. • Wood dust generated from machining Treated TJI[®] Joists may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH-approved respirator and goggles where ventilation is not possible and the allowable exposure limits may be exceeded. • Do not allow treated wood to enter drains, streams or other waterways. Although unlikely to leach out of wood, Bifenthrin is toxic to aquatic organisms.

Fire and Explosion Hazard:	
Ignitability Index	14
Spread of Flame Index	7
Heat Evolved Index	7
Smoke Developed Index	3 – Burning or smoldering Treated TJI® Joists can generate carbon dioxide and other pyrolysis products typical of burning wood. 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/m ³ (40,000 mg/m ³) is often used as the LEL for wood dusts. Use water or dry chemical fire extinguishers or sand to extinguish fires.
Smoking	Smoking should be restricted in storage and work areas.

5. Contact Information

Trus Joist – A Weyerhaeuser business

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6. Additional Information

Date Prepared: 06/25/2004

Prepared By: Corporate Environment Health and Safety

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 Acronyms:

CAS#	Chemical Abstracts Service Registry Number
LEL	Lower Explosive Limit
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit (15 minutes)
TLV	Threshold Limit Value
TWA	Time-Weighted Average (8 hours)