



MATERIAL SAFETY DATA SHEET

COMPANY DETAILS

COMPANY: Juken New Zealand Ltd.,
Triboard Mill.

ADDRESS: Whangatane Drive,
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Kaitaia,
New Zealand.

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1. PRODUCT IDENTIFICATION

PRODUCT NAME: **TRIBOARD (General)***

OTHER NAMES: Not Applicable

MANUFACTURERS CODE: Not Applicable

PHYSICAL DESCRIPTION:

A general purpose reconstituted wood panel board bonded with a formaldehyde based resin adhesive. The wood is 100% derived from New Zealand plantation Pinus Radiata pine species. Available in thicknesses from 15mm to 55mm.

USES:

As a wooden building product for; Solid doors, fire doors, partitions, furniture, benchtops, access floor tiles, sub-floors, fire walls, stairs, gymnasium sprung floors, squash court construction, panel housing construction and general panel use.

* Information applies to all Triboard products.

2. HAZARDOUS INGREDIENTS

CAS RN No.: None

UN NUMBER: None

HAZCHEM CODE: None

DANGEROUS GOODS CLASS: None

COMPONENTS:

	CAS RN	%m/m
<u>Formaldehyde (residual):</u>	50-00-0	< 0.015
<u>Formaldehyde Resin (solids):</u> (Urea/Melamine Type)	25036-13-9	< 15.000
Polyurea/Polyurethane:	Not Available	0.00 - 3.000
<u>Petroleum Wax (Hydrocarbon):</u>	Not Available	< 1.000

***Volatile Organic Compounds (C3 – C10) - Terpenoid Compounds:**

▪ Alpha-pinene	Not Available	Trace
▪ Beta-pinene	Not Available	Trace
▪ 1-limonene	Not Available	Trace
▪ camphene	Not Available	Trace
▪ alpha terpineol	Not Available	Trace

Other Aldehydes VOC's: Not Available Trace

Water: 7732-18-5 < 15.000

- Primarily derived from Pinus Radiata, and being naturally occurring. The Volatile Organic Compounds (VOC's) listed above are the main component VOC's present.

NOTES:

- ❑ Triboard is designated E1 when tested in accordance with AS/NZS 4266.16 Formaldehyde Emission - Desiccator Method.
- ❑ In some cases Polymeric Diphenylmethane Diisocyanate (pMDI) resin may be used as a resin binder additive in the strand core.

3. HAZARDS IDENTIFICATION – ACUTE HEALTH EFFECTS**EYE CONTACT:**

Causes discomfort and can be very irritating (e.g. splinter).

SKIN CONTACT:

Can cause discomfort and irritation. Some individuals may experience an allergic response leading to reddening of the infected area and dermatitis.

INHALATION:

The dust generated from processing this product can be harmful if inhaled. As this product contains residual formaldehyde which is emitted, this may aggravate the upper respiratory tract, irritate the eyes and skin. The effects may be greater in persons who suffer from asthma or who are chemically sensitised to formaldehyde.

INGESTION:

Not considered to cause a problem in the unlikely event of this occurrence.

4. FIRST AID MEASURES

EYE CONTACT:

Dust should be removed by immediately holding the eye/s open and washing continuously for at least 15 minutes with fresh running water. Avoid rubbing the eye. Immediate medical attention should be sought if a wood sliver or splinter is lodged in the eye/s.

SKIN CONTACT:

Remove contaminated clothing and wash before wearing again. Wash the affected skin area thoroughly with soap and water. Seek medical advice if skin reddening or irritation persists.

INHALATION:

Avoid the inhalation of dust generated when processing this product. The effects from dust exposure are generally considered to develop over the longer term. Remove to fresh air. If symptoms persist seek medical attention.

INGESTION:

Give at least 200mL of water. If any adverse reaction occurs, seek medical attention.

5. HEALTH HAZARDS – CHRONIC HEALTH AFFECTS

The principal routes of exposure are usually by inhalation of the formaldehyde vapour emitted from the board product and through inhalation of the dust generated in the processing of Triboard. A combination of inhalation of wood dust coated with formaldehyde is suspected, from recent health studies, to escalate the health hazard. Some individuals may be allergic or chemically sensitised to formaldehyde (aldehydes), wood dust or a combination of the two. In such circumstances avoid contact.

- Triboard contains residues of formaldehyde, which may irritate eyes or mucous membranes (nose and throat) and produce allergic responses in some people at elevated levels above 0.1ppm. High concentrations may trigger attacks in people with asthma (wheezing). There is evidence that some people may develop sensitivity to formaldehyde. Formaldehyde has been shown to cause cancer in animals and may cause cancer in humans.
- Wood dust is classed as a known carcinogen to humans and its inhalation over many years increases the risk of nasal cancers. Similar exposure to uncontrolled wood dust can lead to allergic reactions, such as dermatitis, asthma or chronic eye, nose and throat irritation in some people. Common symptoms of wood dust irritation are nasal discharge, dry or sore nose/throat, blocked, bleeding or itchy nose, sneezing, catarrh or coughing. Wood dust coated with formaldehyde resin can be produced during processing operations, such as cutting and sanding. Wood, such as Pinus Radiata,

contains a number of naturally occurring compounds such as terpenoids and aldehydes. Allergies to these compounds are possible.

- In some cases, Triboard may have been manufactured containing polymeric diphenylmethane diisocyanate resin (pMDI) as a binder. This remains in the finished board in the form of polyurea or polyurethane. Evidence suggests that this causes no health effects in the normal population.

6. PRECAUTIONS FOR USE

EXPOSURE STANDARDS

<u>Formaldehyde:</u>	Ceiling:	1.0ppm (1.2mg/m ³) – NZ OSH
	ACGIH TLV:	0.3ppm
	NIOSH REL TWA:	0.016ppm
	NIOSH REL STEL:	0.1ppm
<u>Wood Dust:</u> (Softwood)	Ceiling:	5mg/m ³
	STEL:	10mg/m ³

REDUCING EXPOSURE

- If you experience adverse reactions to formaldehyde, you may want to avoid the use of pressed wood products and other formaldehyde emitting products.
- Sawing and sanding equipment should be fitted with suitable dust extraction equipment.
- When handling Triboard wear gloves to avoid splinters and sharp edges. Use a disposable dust mask (AS1715-1982 Class L or Class M) and eye protection when sanding or sawing. Wear clean work clothing and maintain good personal hygiene. Avoid repeated and prolonged inhalation of dust or skin contact. Do not smoke.
- Storage and work areas containing large quantities of Triboard should be adequately ventilated as specified by the Building Research Association of New Zealand (BRANZ).
- Workers who are involved in processing Triboard should have regular lung function tests conducted. Prospective workers should have a lung function pre-employment check and questioned on their possible allergy to formaldehyde or wood dust.
- To minimise formaldehyde emissions all exposed surfaces and edges should be sealed with a coating, such as polyurethane, water based or alkyd paint.
- Where Triboard is used in the construction of a building, adequate ventilation and room air exchanges should be maintained in accordance with Building Research Association of New Zealand (BRANZ) recommendations.
- Increasing the rate of ventilation in a building will help reduce formaldehyde levels. The use of dehumidifiers and air conditioning to control humidity and maintain a moderate temperature can help reduce formaldehyde emissions.

NOTE

Other sources of formaldehyde are also present in buildings, such as durable press curtains, wallpapers, carpets, tobacco smoke, furniture, foam insulation.

7. FIRE FIGHTING MEASURES

GENERAL:

Triboard is flammable but moderately difficult to ignite. Avoid sources of radiant heat and naked flame. Avoid sparks and sources of ignition in dust extraction equipment. Clean up sawdust and off-cuts to reduce the risk of fire.

EARLY FIRE HAZARD PROPERTIES: (AS/NZS1530:1999 PART 3)

Ignitability Index:	14
Spread of Flame Index:	6
Heat Evolved Index:	5
Smoke Developed Index:	4

FLASHPOINT: >100C

AUTOIGNITION TEMPERATURE: Not Available.

FLAMMABLE LIMITS (% by volume/air): Not Available

EXTINGUISHING MEDIA: Water, water spray, Foam.

FIRE FIGHTING PROCEDURES: Breathing apparatus recommended.

FIRE AND EXPLOSION HAZARDS: Carbon dioxide and carbon monoxide (CO₂, CO) emitted which can cause asphyxiation. Fine dry wood dust can be explosive.

8. HANDLING AND STORAGE

HANDLING:

Avoid contact with skin.

STORAGE:

Store in a well-ventilated, cool and dry area. Do not store with oxidising or flammable materials.

9. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Where Triboard is used in the construction of a building, adequate ventilation and room air exchanges should be maintained in accordance with Building Research Association of New Zealand (BRANZ) recommendations.

Storage and work areas containing large quantities of Triboard should be adequately ventilated as specified by the Building Research Association of New Zealand (BRANZ).

PERSONAL PROTECTIVE EQUIPMENT:

When handling Triboard wear gloves to avoid splinters and sharp edges. Use a disposable dust mask (AS1715-1982 Class L or Class M) and eye protection when sanding or sawing. Wear clean work clothing and maintain good personal hygiene. Avoid repeated and prolonged inhalation of dust or skin contact. Do not smoke.

10. PHYSICAL PROPERTIES

DENSITY (kg/m³): 570 – 775
MOISTURE CONTENT: 8 – 12%

11. DISPOSAL CONSIDERATIONS

Dispose of in an approved waste disposal facility and in accordance with local regulations.

12. OTHER INFORMATION

The information contained herein is given in good faith, but no warranty, expressed or implied is made.

13. REFERENCES AND RECOMMENDED READING

- ❑ Occupational Safety and Health Service of the Department of Labour (New Zealand): Workplace Exposure Standards 1994.
- ❑ Working Safely with Wood Panel Products: Prepared with the assistance of the Department of Labour Occupational Safety and Health.
- ❑ Health and Safety in Employment Act 1992.
- ❑ Formaldehyde and Wood Dust
Update Bulletin
Issue No. 29, October 2000
Drs. David and Ki Douglas (Douglas Consulting Australia)
- ❑ Working Safely with Wood Panel Products.
Compiled by the New Zealand Wood Panel Manufacturers Association – 2001
- ❑ Home Health – Facts about Formaldehyde in Wood Composite Products.
Compiled by the New Zealand Wood Panel Manufacturers Association – 2001