

MATERIAL SAFETY DATA SHEET

Section 1: Identification of Material and Supplier

Product Name: Stuctaflor[®] Particleboard Flooring,
Termiflor[®] Particleboard Flooring

Other Names: Structaflor[®], Termiflor[®], Structaflor[®] Square Edge, Structaflor[®]
Yellow Tongue, Structaflor[®] **Red Tongue**, Structaflor[®] **Blue Tongue**

Manufacturer's Product Code: Not Applicable

Recommended Use: Flooring

Supplier name: Carter Holt Harvey Wood Products Australia Pty Ltd
ACN 002 993 106

Address: Tower A, Level 6, 821 Pacific Highway
Chatswood NSW 2067
Locked Bag 4025
Chatswood NSW 2067
Australia

Telephone 1300 658 828

Facsimile: 1800 891 881

Section 2: Hazards Identification

Overall Statement of Hazardous Nature:

In its intact state, this product is classified as not hazardous according to the criteria of Worksafe Australia. Dust from the product is hazardous according to the criteria of Worksafe Australia.

Health Hazard Information:

In its intact state this product is not classified as a hazardous substance by Worksafe Australia. Formaldehyde gas may be released under some conditions, particularly when product is heated. However, in well ventilated storage areas and workplaces, the concentration of formaldehyde is unlikely to exceed the World Health Organisation standard of 0.08 ppm for the general environment and it will be well below the Worksafe Australia occupational Exposure Standard of 1.0ppm.

Wood dust may be produced from machining the product, and gas and vapour may be produced from heat process.

Exposures to wood dust produced from machining the products and gas and vapours from heat processing with inadequate ventilation may result in the following health effects:

- Abdominal discomfort if dust is swallowed
- Eye irritation causing discomfort and redness.
- Skin irritation resulting in itching and occasional red rash.
- Nose, throat and lung irritation, especially in people with upper respiratory tract or chest complaints such as asthma.

Repeated exposure over many years to uncontrolled wood dust increases the risk of nasal cavity cancer. Inhalation of wood dust may also increase the risk of lung fibrosis

(scarring). There are also increased risks of respiratory and skin sensitisation from wood dust and formaldehyde resulting in asthma and dermatitis respectively. Wood dust has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans. Formaldehyde has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans and by the European Union (EU) as a Category 3 carcinogen (possibly carcinogenic).

Explosion Hazard:

Dry wood dust in high concentrations (> 40 grams of dust per m³ of air) can be explosive.

Dangerous goods class &

Subsidiary Risks: None Allocated.

Poisons schedule Number: None Scheduled.

Section 3: Composition / Information on Ingredients

Substances

Chemical name	CAS Number	Proportion
Wood from plantation softwood	---	> 86%
Phenol/ melamine/ urea/ Tannin/ Formaldehyde resin	9003-35-4	< 15%
Non-hazardous resin	-	< 18%
Paraffin Wax	8002-74-2	< 2%

Notes

- 1) The ingredients are bound together under heat and pressure. The process cures the resin but small amounts of formaldehyde from the resin may be released from the finished product. The finished product contains less than 1.5 mg/L of free formaldehyde when tested to AS/NZS 4266.16 (Desiccator test).

Section 4: First Aid Measures

Swallowed: Give water to drink. If abdominal discomfort occurs seek medical attention.

Eyes: Flush with flowing water for at least 15 minutes. If symptoms persist seek medical attention.

Skin: Wash with mild soap and running water. Remove clothes contaminated with dust. Do not scratch or rub skin if it becomes irritated.

Inhalation: Leave dusty area.

First Aid Facilities: ---

Advice to Doctor: Treat symptomatically

Section 5: Fire Fighting Measures

Extinguishing media: Water, Carbon dioxide, Foam or Dry chemicals fire extinguishers.

Hazards from combustion products: Burning or smouldering boards or dust can generate carbon dioxide, carbon monoxide, oxides

of nitrogen, hydrogen cyanide and other pyrolysis products which are irritating to respiratory tract.

Protective precautions for fire fighters

Fire fighters to wear breathing apparatus.

Hazchem code:

None Allocated

Section 6: Accidental Release Measure

Emergency procedures:

Not Applicable

Methods and materials for containment and clean up:

Not applicable

Section 7: Handling and Storage

Handling information:

See Personal Protection.

Storage information:

The boards should be stored in well ventilated areas away from sources of heat, flame or sparks. Avoid smoking in storage or working areas.

Section 8: Exposure controls / Personal Protection

National Exposure Standards:	<i>NOHSC[1003 (1005)] Australia / OSH New Zealand (May 1995)</i>
Wood dust (softwoods)	5 mg/m ³ TWA 10 mg/m ³ STEL Listed as a Sensitiser
Wood dust (hardwoods)	1 mg/m ³ TWA Listed as a Sensitiser
Formaldehyde	1.0 ppm (1.2 mg/m ³) TWA 2.0 ppm (2.5 mg/m ³) STEL (short term exposure limit of 15 minutes). Listed as a Sensitiser and Category 2 carcinogen (probable human carcinogen)
Paraffin wax fumes	2mg/m ³ TWA

Not applicable

Biological limit values:

Engineering controls:

All work with these boards should be carried out in such a way as to minimise the generation of, and exposure to dust. Under factory conditions, sawing, drilling, sanding etc. should be done with equipment fitted with exhaust devices capable of removing wood dust, at source. Hand power tools should be fitted with dust bags and used in well ventilated areas. Work areas should be well ventilated. They should be cleaned at least daily, and dust removed by vacuum cleaning or wet sweeping method.

Inhalation of airborne particles from other sources in the work environment, including those from cigarette smoke, may increase the risk of contracting lung diseases

associated with exposure to dust from this product. Carter Holt Harvey Wood Products Pty Ltd recommends that all work and storage areas be smoke free and other airborne contaminants be kept to a minimum.

For fire prevention avoid build-up of dust and keep working areas well ventilated. Avoid sources of heat and ignition including those associated with electrical equipment included the ones associated with dust extraction equipment.

Ventilation:

Local exhaust ventilation should be provided at areas of cutting to remove airborne dust. General dilution ventilation should be provided as necessary to keep airborne dust below the applicable exposure limits and guidelines. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

Personal Protective Equipment

Skin protection:

Wear loose, comfortable clothing. Long sleeved shirts and trousers are recommended to prevent skin irritation. Wash work clothes regularly and separately from other clothes. Wear comfortable work gloves (AS2161 or NZS5812) to avoid hand cuts when handling panels.

Eye protection:

Wear industrial safety glasses or non fogging goggles (AS/NZS 1336) when machining products.

Respiratory protection:

Avoid breathing dust. Wear a class P1 or P2 replaceable filter or disposable half face-piece respirator when machining products. Respirators should comply with AS/NZS 1716 and be selected, used and maintained in accordance with AS/NZS 1715.

Section 9: Physical and Chemical Properties

Appearance:

The products are manufactured as pressed particleboards ranging in thickness from 19 mm to 25 mm. They are made from plantation wood flakes, resin (glue) and wax. The long edges are grooved with a PVC tongue inserted in one groove. Some boards have square cut edges. Termiflor boards contain a termiticide additive.

Odour:

Newly manufactured boards and freshly cut surfaces

pH:

Not determined

Vapour pressure:

Not determined

Vapour density:

Not determined

Boiling point:

Not applicable

Melting point:

Not applicable

Solubility in water:

Negligible

Specific gravity:

0.68 - 0.7

Flammability:

These products are flammable but difficult to ignite.

Flash point:

Not applicable

Flammable limits in air:

Not applicable

Ignition temperature: > 200 °
Early fire hazard properties when tested to AS/NZS 1530 Part 3:
Ignitability index: 14 – 15
Spread of flame index: 7
Heat evolved index: 6
Smoke developed index: 3

Potential for dust explosion: Yes

Additional information

Specific heat value: Not Applicable
Particle size: Not Applicable
Volatile Organic Compounds content: Not Applicable
Evaporation rate: Not Applicable
Viscosity: Not Applicable
Percent volatile: Not Applicable
Octanol / water partition coefficient: Not Applicable
Saturated vapour concentration: Not Applicable
Decomposition temperature: Not Applicable

Section 10: Stability and Reactivity

Chemical stability: The product is chemically stable under normal conditions.

Conditions to avoid: Avoid open flames and environments with high moisture and temperatures.

Incompatible material: Avoid contact with oxidizing agents and strong acids.

Hazardous decomposition products: Thermal and /or thermal oxidative decomposition or burning or smouldering boards or dust can generate carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen cyanide and other pyrolysis products.

Hazardous reactions: Not applicable.

Section 11: Toxicological Information

Any health hazards associated with these products have been evaluated on the basis of the individual ingredients, and these hazards should be assumed to be additive. The hazards described in this document have been evaluated based on a threshold of 1.0% for all hazardous ingredients and 0.1% for all carcinogens.

Acute effects:

The dust, which may be generated during manual or mechanical cutting, drilling, sanding or other abrading processes, and the smoke generated by heating or laser cutting, may cause temporary irritation of the eyes and upper respiratory system. The symptoms are expected to subside after exposure has stopped and are not expected to cause any long term effects. Allergic skin and lung reactions have been reported with exposure to various wood panels dusts due to the chemicals presented in wood and cured resin. These rashes resemble other allergic skin reactions caused by plants, and usually heal rapidly.

Chronic effects:

The risk of nasal cancer has been associated with wood dust exposure. In the 1960s,

studies linking wood dust exposure in the furniture industry with nasal cancer were first reported in England. The link was confirmed in several other European countries and furniture industries. The studies showing a link to nasal cancer have been primarily conducted in industries using hardwood. The International Agency for Research on Cancer (IARC) evaluated dusts from both hardwood and softwood in 1995 and concluded that: "there is sufficient evidence in humans for the carcinogenicity of wood dust. There is inadequate evidence in experimental animals for the carcinogenicity of wood dust. Wood dust is carcinogenic to humans (Group 1)".

The IARC also evaluated formaldehyde in 1995¹ and concluded that: "There is limited evidence in humans for the carcinogenicity of formaldehyde; and that overall, formaldehyde is probably carcinogenic to humans (group 2A)". The IARC again evaluated formaldehyde in June 2004² and concluded that: "There are adequate data available from humans for an increased risk of nasopharyngeal cancer" and that formaldehyde should now be classified as Group 1, carcinogenic to humans.

Whilst this wood panel product contains less than 0.01% free formaldehyde, people using the product may be exposed to low concentration of formaldehyde if the boards are heated (as in laminating), are cut by laser cutting machines, and/or if dust particles come in contact with the moist mucous membranes lining the upper respiratory track.

Extensive literature searches and research carried out by independent occupational and environmental health specialists has not indicated any risks over and above those associated with wood dust without binder. This research includes the 1999 formaldehyde risk assessment carried out by US scientists in collaboration with the US EPA and Health Canada. The risk assessment concludes that if a non-smoking worker were exposed to 0.004 ppm of formaldehyde continuously for 80 years, and also to 0.1 ppm for 40 years at work, then the predicted additional risk of respiratory tract cancer would be 4.1 per 1,000,000,000. The controls needed for minimising the potential for formaldehyde exposure from this product will be the same as those for control of dust exposures. These risk assessments and conclusions are in no way altered by the reclassification of formaldehyde to Group 1 by the IARC.

Reference:

1. IARC *Monographs on the Evaluation of Carcinogenic Risks to Humans*. Volume 62: Wood dust and formaldehyde. IARC, Lyon, France. 1995.
2. IARC Press Release No 153, 15 June 2004. IARC, Lyon, France.

Section 12: Ecological Information

Ecotoxicity:	These products should be used only for its designated purposes.
Persistence and degradability:	Not determined
Mobility:	Not determined
Environmental fate:	Not determined
Bio accumulative potential:	Not determined

Section 13: Disposal considerations

Disposal method and containers:	These products are not regulated as a hazardous waste by Australian environmental authorities. Off-cuts and general waste material should be placed in containers and disposed of at approved landfill sites or burnt in an approved furnace or incinerator in accordance with disposal authority guidelines.
--	---

Special precautions for landfill or incineration:

Do not burn in barbecues, combustion stoves or open fires in the home as irritating gases are emitted.

Section 14: Transport Information

UN Number:	None Allocated
UN Proper shipping name:	None Allocated
Class and subsidiary risk:	None Allocated
Packing group:	None Allocated
Special precautions for user:	None Allocated
Hazchem Code:	None Allocated

These products are not regulated as dangerous goods. No special transport requirements are necessary.

Section 15: Regulatory Information

Carter Holt Harvey has assessed this product in accordance with the criteria of the National Occupational Health and Safety Commission: NOHSC:1008(1999) and NOHSC:10005(1999), and the assessment is that occupational exposure to dust, smoke or fume from this product is hazardous according to the criteria of the NOHSC.

No special State or Commonwealth regulations apply. The product is not listed in the Standard for the Uniform Scheduling of Drugs and Poisons.

Wood dust - (certain hardwoods such as beech and oak), and Wood dust - softwood are listed in the 1999 NOHSC list of Designated Hazardous Substances: NOHSC: 10005(1999).

Formaldehyde - is listed in the 1999 NOHSC list of Designated Hazardous Substances: NOHSC: 10005(1999) if present in concentrations of 0.2% or more (this wood panel product contains <0.01% formaldehyde).

Section 16: Health & Safety Information to Users

Cater Holt Harvey Health and Safety Warning

Wood panels product

Ingredients: Wood fibre or particles and heat cured resin.

Risk: Dust and smoke from this product are irritating to eyes, skin and respiratory system.
May cause sensitisation by inhalation (asthma) and skin contact (dermatitis).
Repeated inhalation of the dust increases the risk of nasal cavity cancer and may increase the risk of lung fibrosis (scarring).

Safety: Avoid repeated or prolonged contact with skin.
Avoid contact with eyes.
Avoid breathing dust and smoke.
Wear suitable clothing, standard duty gloves (AS 2161), and dust resistant eye protection (AS/NZS 1336). If machining without adequate dust or smoke extraction or if dusty or smoke, respiratory protection (particulate dust mask) must be worn (AS/NZS 1715 and 1716). Keep work areas clean by wet sweeping and/or vacuuming. Wash work clothes regularly and separately from other clothes.

First-aid: Irrigate eyes with plenty of water.
Wash skin with soap and water.

Disposal: Follow above safety instructions, and:
Collect in containers for disposal as trade waste in accordance with local authority guidelines.

The intact product and dust must not be burnt in barbecues, combustion stoves, or open fires in the home, as irritating gases are emitted.

Section 17: Other Information

Whilst the information contained in this document is based on data which, to the best of our knowledge, was accurate and reliable at the time of preparation, no responsibility can be accepted by us for errors and omissions. The provision of this information should not be construed as a recommendation to use any of our products in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Since the information contained in this document may be applied under conditions beyond our control, no responsibility can be accepted by us for any loss or damage caused by any person acting or refraining from action as a result of this information.

Date of preparation or last revision of the MSDS: 15/07/2004

Sources of data: *IARC Monographs on the evaluation of Carcinogenic Risks to Humans. Vol:62 Wood dust and Formaldehyde. IARC, Lyon France 1995.*
IARC Press Release Vol:153 Formaldehyde. IARC, Lyon France 1995.