

MATERIAL SAFETY DATA SHEET

WOOD VENEER PRODUCT

CHH Woodproducts / Woodlogic: LOSP treated radiata pine plywood

(Technical Note 01/11/23: Revised 1 May 2004)

IMPORTANT NOTICE: This Material Safety Data Sheet (MSDS) is written by CHH Woodproducts / Woodlogic (divisions of Carter Holt Harvey Ltd ARBN 050 319 152) in accordance with Worksafe Australia and OSH New Zealand Guidelines. As such, the information contained herein must not be altered, deleted or added to. CHH Woodproducts / woodlogic will issue a new MSDS when there is a change in product specifications and/or guidelines or regulations. CHH Woodproducts / woodlogic will not accept responsibility for changes made to its MSDS in content by any other person.

IDENTIFICATION

Product Names:	Ecoply structural plywood to AS/NZS 2269, LOSP treated LOSP treated plywood, H3 LOSP treated plywood LOSP preservative treated plywood Shadowclad Groove, Shadowclad Texture, Shadowclad Rustic
Chemical Name:	Light organic solvent preservative TNTN (Tributyltin naphenate) preservative treatment
UN Number:	None allocated
Registered Trade Name:	Carter Holt Harvey Ltd
Dangerous Goods Class:	None allocated
Hazchem Code:	None allocated
Poisons Schedule:	None allocated
Use:	LOSP treatment is used to protect plywood from fungi and insects in moist or exterior environments in residential, commercial, industrial and marine construction, furniture and/or general purpose building.

Physical Description/Properties

Appearance:

The products are manufactured as pressed boards ranging in thickness from 3mm to 45mm. They are made from *Pinus radiata* wood veneers bonded together with resin. LOSP treatment retains the natural appearance of wood that weathers outdoors over several years to varying shades of grey unless painted.

Odour:

Freshly treated boards smell of the white spirits solvent, 70% to 80% of which evaporates in 2 to 5 days leaving a residual odour for up to 6 months.

Boiling Point:	Not applicable
Vapour Pressure:	Not applicable
Vapour Density:	Not applicable
Melting Point:	Not applicable
Solubility in Water	Highly insoluble
Flashpoint:	The solvent in freshly treated plywood is a class 3 solvent and has a flashpoint > 40°C.
Specific Gravity:	0.50-1.00
Flammability in air:	Fine airborne wood dust, generated when the product is machined, can ignite spontaneously. Normally, by the time this product is machined, solvent concentration is at a low level and should not contribute significantly to increased flammability.
Auto Ignition Temperature:	>200°C

Ingredients:

Substance/Chemical Entity	CAS NO.	Proportion by weight
Wood veneer	None	>90 - 95 %
Phenol formaldehyde resin	40798-65-0	>8%
Tributyltin naphthenate (TBTN)	85409-17-2	0.4%
Permethrin	52645-53-1-5	0.02%
Dichlorfluanid	001085-98-9	0.01%
Petroleum distillate solvent		0% (evaporates)
Parafin wax	8002-74-2	<3%

Note: The wood veneer and the phenolic resins are bonded together under heat and pressure. The process cures the resin. However, small amounts of formaldehyde may be released from the finished product. In newly manufactured plywood, formaldehyde emission has been measured in the range 0.03-0.05ppm using the large scale chamber test. After manufacture and machining the LOSP treatment is applied. The process involves impregnation of the preservative solution and vacuum pressure cycles to extract the major part of the solvent (Light organic petroleum distillate) leaving the active ingredients in the wood. The remaining solvent evaporates, most of it in the first week after treatment and by six months in use there is no residual solvent. Any residual formaldehyde will be at very low levels after these processes.

HEALTH HAZARD INFORMATION

Health Effects

This product, in its natural form, is not classified as hazardous. However, handling panel edges and surfaces may cause splinters. The known health effects of the constituents of the boards are as follows:

Wood dust containing LOSP preservative treatment salts

Health effects are similar to those for untreated wood with the main potential hazards being as a skin or respiratory tract irritant. When the boards are machined (sawn, sanded, drilled, routed, planed, etc) wood dust is produced. Wood dust and splinters may cause irritation of the nose and throat, eyes and skin. Wood dust may also be a sensitiser, and some people may develop allergic dermatitis or asthma. Inhalation of wood dust may increase the risk of nasal and para nasal sinus cancers. **Exposure to the wood dust produced from machining LOSP treated boards may result in the following health effects:**

Acute:

Ingestion: Swallowing may cause nausea, vomiting, abdominal pain or diarrhoea. Chemical manufacturers recommend that any run-off from treated surfaces should not be used for drinking water.

Unsealed plywood claddings are therefore restricted in these situations.

Eye: LOSP treated wood dust may be irritating to the eyes, causing discomfort and redness.

Skin: The wood dust may irritate the skin, resulting in itching and occasionally a red rash. Allergic contact dermatitis may occur.

Inhaled: The wood dust may irritate the throat and lungs especially in people with upper respiratory tract or chest complaints. Asthma may occur. The preservative chemicals may cause headaches or drowsiness.

Chronic:

Repeated exposures to uncontrolled wood dust from these boards over many years may increase the risk of allergies, dermatitis, asthma or chronic nose or throat irritation in some people. The risk of nasal or para nasal sinus cancers may also be increased. If the work practices noted in this MSDS are followed, no chronic health effects are anticipated.

First Aid:

Swallowed: Rinse mouth with water and give water to drink. Seek medical attention if there is abdominal discomfort.

Eye: Remove contact lenses, flush with flowing water for at least 15 minutes, and if symptoms persist seek immediate medical attention.

Skin: Wash with mild soap and running water

Inhaled: Remove to fresh air. If recovery is not rapid seek medical assistance.

Advice to Doctor: Treat symptomatically

Phenol formaldehyde resin

In the finished product, the cured resin is inert and not likely to contribute to health effects.

Formaldehyde emission

Formaldehyde gas is irritating to the nose and throat, eyes and skin. It is recommended that storage areas be well ventilated to avoid any irritating effects of a build-up of formaldehyde.

In well-ventilated storage areas and work places utilising these products, the concentration of formaldehyde in the air will not exceed the World Health Organisation standard of 0.1 ppm for the general environment. It will be well below the occupational Exposure Standard of 1.0 ppm on a time-weighted average (TWA). Sealing plywood with paint, varnish or other surface finishes further reduces emissions from the boards. In exterior applications, where treated plywoods are most likely to be used, emissions are unlikely to be detectable above background levels.

The International Agency for Research on Cancer (IARC) assessed formaldehyde in 1982 as Group 2A: - possibly carcinogenic to humans - on the basis of evidence that inhalation of formaldehyde gas caused nasal cancer in experiments with rats. In the experiments, groups of rats were exposed to formaldehyde for six hours a day, five days a week for up to two years at concentrations of 0, 2.0, 5.6 and 14.3 ppm. Fifty percent of those exposed at 14.3 ppm, one percent exposed to 5.6 ppm, but none exposed to 2.0 or 0 ppm developed nasal cancers.

There have been more than thirty epidemiological studies involving over 150,000 people occupationally exposed to formaldehyde. These, and studies of behaviour to toxicity, indicate that exposure to formaldehyde below the occupational Exposure Standard of 1 ppm TWA (time weighted average) will not result in an increased risk of cavity cancers in humans.

As veneer products have emission levels of 0.03 to 0.05 ppm, well below the WHO recommended level of 0.1 ppm, under reasonably foreseeable circumstances it is unlikely that the presence of traces of formaldehyde in the product poses a health risk.

Paraffin Wax

The wax vapour may be irritating to the nose, throat, eyes and skin if the product is heated above 120°C.

PRECAUTIONS FOR USE

Exposure Standards:

There are no specific standards for LOSP treated softwood in the Exposure Standards, but for the individual ingredients in the wood dust the limits are:

	OSH New Zealand	Worksafe Australia
Wood dust:	5 mg/m ³ time-weighted average (TWA)	5 mg/m ³ time-weighted average (TWA) 10 mg/m ³ short term exposure limit (STEL) Wood dust is also listed as a sensitiser and the Exposure Standard is under review
Formaldehyde	1.0 ppm (1.2 mg/m ³) time-weighted average (TWA) 2.0 ppm (2.5 mg/m ³) short term exposure limit (STEL)	1.0 ppm (1.2 mg/m ³) time-weighted average (TWA) 2.0 ppm (2.5 mg/m ³) short term exposure limit (STEL)
Parafin wax (fume)	2 mg/m ³ time-weighted average (TWA)	2 mg/m ³ time-weighted average (TWA)

In the interests of maintaining a safe working environment, it is recommended that workplace exposures to wood dust should not exceed 1.0 mg/m³ TWA.

Engineering Controls:

All work with these LOSP treated boards should be carried out in such a way as to minimise the generation of wood dust. Under factory conditions, machining should be done with equipment fitted with exhaust devices capable of removing wood dust at the source. Hand power tools should be fitted with dust bags.

Work areas should be well ventilated. They should be cleaned at least daily, and wood dust should be removed by vacuum cleaning or by wet sweeping.

Skin Protection:

Wear loose, comfortable clothing. Long sleeved shirts, trousers and comfortable work gloves (AS2161) should be worn if skin irritation occurs, and to minimise the risk of splinters.

After handling boards, wash with mild soap and water. Do not scratch or rub the skin if it becomes irritated. Wash work clothes regularly and if possible separate from other clothes.

Respiratory Protection:

If wood dust exposures are not controlled when machining (sawing, routing, planing, drilling, sanding, etc.) a class P1 or P2 replaceable filter or disposable face piece respirator should be worn. Respirators should comply with AS/NZ1716, and be selected, used and maintained in accordance with AS/NZS1715.

Eye Protection:

Safety glasses or non-fogging goggles (AS/NZS1337) should be worn when machining.

Flammability:

These boards are flammable but difficult to ignite. LOSP treatment solvents present in freshly treated boards may increase flammability but in service, the solvent evaporates and the boards should be no more flammable than untreated wood. Avoid a build-up of wood dust and keep all storage work areas well ventilated. Avoid sources of radiant heat and flame, and avoid sparks and sources of ignition in all electrical equipment, including dust extraction equipment.

People must not smoke in storage or work areas.

SAFE HANDLING INFORMATION

Storage and Transport:

Boards should be stored in well ventilated areas away from sources of heat, flames or sparks.

No special transport requirements are considered necessary.

Spills and Disposals:

Off-cuts and general waste material should be placed in containers and disposed of at approved landfill sites, or disposed of in an approved furnace or incinerator, in accordance with disposal authority guidelines. LOSP treated plywood should not be burnt in open fires, stoves, fireplaces or residential boilers.

Wood dust should be cleaned up by vacuuming or wet sweeping.

Fire/Explosion Hazard:

Early fire hazard properties as determined in accordance with AS1530 Part 3.

Ignitability Index 14

Spread of Flame Index 7 - 8

Heat Evolved Index 7 - 10

Smoke Developed Index 2 - 3

Burning or smouldering boards or wood dust can generate irritating and toxic fumes and gases including carbon monoxide, carbon dioxide, aldehydes, and organic acids. The emission of treatment chemicals is temperature dependent but in a fire TBTN breaks down to a tin oxide residue that is not a major toxin, and is a common ingredient in putty. Dry wood dust in high concentrations can be explosive. Use water or dry chemical fire extinguishers. Self containing breathing apparatus should be worn by fire-fighters.

Smoking:

Storage and work areas should be smoke free

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The information contained in this document is based on data available at the time of writing, which we believe is accurate and reliable. From time to time the information will be changed and added to as new data becomes available.

Carter Holt Harvey encourages its customers to take advantage of recycling initiatives that are now available. Packaging is a resource to be re-used where practical and feasible, or to be disposed of with the least detrimental impact on the environment.

Disposal: Follow safety instructions.

Paper based packaging products can be recycled through normal paper based recycling methods while metal, plastic and timber packaging materials should be recycled through repackaging centres or agencies.

In the event that recycling is not possible, all packaging materials should be collected in containers for disposal as trade waste and disposed of in accordance with local authority procedures.