

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 1 of 9

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

PRODUCT USE

Used in residential, commercial and industrial construction, furniture and fitments and/or general purpose building.

SUPPLIER

Company: Carter Holt Harvey (CHH) Wood Products

Address:

PO Box 425

Box Hill

VIC, 3128

AUS

Telephone: +61 3 9258 7600

Fax: +61 3 9258 7629

Company: Carter Holt Harvey (CHH) Wood Products

Address:

Private Bag 92106

Manukau

Auckland,

NZL

Telephone: +64 9 262 6000

Fax: +64 9 261 0501

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE

None

RISK

None under normal operating conditions.

SAFETY

None under normal operating conditions.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
wood veneer		>90
impregnation residuals, as		<10
tebuconazole	107534-96-3	
propiconazole	60207-90-1	^
permethrin	52645-53-1	^
3- iodo- 2- propynyl butyl carbamate	55406-53-6	^
In use, may generate		
wood dust softwood		Not avail.

THIS REPORT IS FOR TREATED PRODUCT ONLY

Section 4 - FIRST AID MEASURES

SWALLOWED

Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations.

- Immediately give a glass of water.

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 2 of 9

Section 4 - FIRST AID MEASURES

- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations.

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

Brush off dust.

In the event of abrasion or irritation of the skin seek medical attention.

INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.

Use water delivered as a fine spray to control the fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

Combustible. Will burn if ignited.

- Wood products do not normally constitute an explosion hazard.
- Mechanical or abrasive activities which produce wood dust, as a by-product, may present a severe explosion hazard if a dust cloud contacts an ignition source.
- Hot humid conditions may result in spontaneous combustion of accumulated wood dust.
- Partially burned or scorched wood dust can explode if dispersed in air.
- Wet dusts may ignite spontaneously.
- Solid fuels, such as wood, when subjected to a sufficient heat flux, will degrade, gasify and release vapours. There is little or no oxidation involved in this gasification process and thus it is endothermic. This process is referred to as forced pyrolysis but is sometimes referred to, wrongly, as smoldering combustion. This type of combustion, once initiated, can continue in a low-oxygen environment, even when the fire is in a closed compartment with low oxygen content.
- An airborne concentration of 40 grams of dust per cubic meter of air is frequently used as the lower explosive limit (L.E.L) of wood dusts.
- Thermal oxidative decomposition may produce vapours and gases including carbon monoxide, aldehydes (including formaldehyde), organic acids, cyanides, polycyclic aromatics, and other volatile organic fragments.

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 3 of 9

Section 5 - FIRE FIGHTING MEASURES

FIRE INCOMPATIBILITY

Avoid exposure to excessive heat and fire.

HAZCHEM: None

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

Pick up.

Refer to major spills.

MAJOR SPILLS

Pick up.

Secure load if safe to do so.

Bundle/collect recoverable product.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Use gloves when handling product to avoid splinters.

SUITABLE CONTAINER

Not applicable.

STORAGE INCOMPATIBILITY

Keep dry.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations
- Consider storage in banded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).
- Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	STEL mg/m ³
Australia Exposure Standards	tebuconazole (Inspirable dust (not otherwise classified))	10	
Australia Exposure Standards	permethrin (Inspirable dust (not otherwise classified))	10	
Australia Exposure Standards	3- iodo- 2- propynyl butyl	10	

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 4 of 9

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Source	Material	TWA mg/m ³	STEL mg/m ³
Australia Exposure Standards	carbamate (Inspirable dust (not otherwise classified)) wood dust softwood (Wood dust (soft wood))	5	10

The following materials had no OELs on our records

• propiconazole:

CAS:60207- 90- 1 CAS:75881- 82- 2

MATERIAL DATA

Not available. Refer to individual constituents.

INGREDIENT DATA

TEBUCONAZOLE:

It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

WOOD DUST SOFTWOOD:

Wood dusts produce dermatitis and an increased risk of upper respiratory disease. Epidemiological studies in furniture workers show an increased risk of lung, tongue, pharynx and nasal cancer. An excess risk of leukaemia amongst millwrights probably is associated with exposure to various components used in wood preservation.

Impairment of nasal mucociliary function may occur below 5 mg/m³ and may be important in the development of nasal adenocarcinoma amongst furniture workers exposed to hardwoods.

Certain exotic hardwoods contain alkaloids which may produce headache, anorexia, nausea, bradycardia and dyspnoea.

The softwood TLV-TWA reflects the apparent low risk for upper respiratory tract involvement amongst workers in the building industry. A separate TLV-TWA, for hard woods, is based on impaired nasal mucociliary function reported to contribute to nasal adenocarcinoma and related hyperplasia found in furniture workers.

PERSONAL PROTECTION

EYE

When sawing, machining or sanding use

- Safety glasses with side shields.

- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 5 of 9

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HANDS/FEET

Protective gloves eg. Leather gloves or gloves with Leather facing.
Safety footwear.

OTHER

No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Barrier cream.
- Eyewash unit.

RESPIRATOR

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	A- AUS P	-
1000	50	-	A- AUS P
5000	50	Airline *	-
5000	100	-	A- 2 P
10000	100	-	A- 3 P
	100+		Airline**

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Plywood in all sizes, impregnated with liquid treatment.

THIS CHEMWATCH REPORT IS FOR TREATED PRODUCT ONLY.

PHYSICAL PROPERTIES

Does not mix with water.

Molecular Weight: Not Applicable
Melting Range (°C): Not Applicable
Solubility in water (g/L): Immiscible
pH (1% solution): Not Applicable
Volatile Component (%vol): Not Applicable
Relative Vapour Density (air=1): Not Applicable
Lower Explosive Limit (%): Not Available

Boiling Range (°C): Not Applicable
Specific Gravity (water =1): Not Available
pH (as supplied): Not Applicable
Vapour Pressure (kPa): Not Applicable
Evaporation Rate: Not Applicable
Flash Point (°C): Not Applicable

Upper Explosive Limit (%): Not Available

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 6 of 9

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Autoignition Temp (°C): Not Available
State: Manufactured

Decomposition Temp (°C): Not Available
Viscosity: Not Applicable

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Product is considered stable and hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Not normally a hazard due to physical form of product.
Considered an unlikely route of entry in commercial/industrial environments.
Ingestion of sawdust may cause nausea, abdominal pain, vomiting or diarrhoea.

EYE

The dust may produce eye discomfort causing smarting, pain and redness.

SKIN

The dust is discomforting and mildly abrasive to the skin and may cause drying of the skin, which may lead to contact dermatitis.

INHALED

Not normally a hazard due to physical form of product.
Generated dust may be discomforting.

CHRONIC HEALTH EFFECTS

Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations.

Various woods are able to induce allergies, both of the immediate onset type in woodwork which causes a respiratory syndrome, and of the delayed type which results in eczema from exposure to dusts and direct contact. Cross-reaction is common. Certain alkaloids are contained in some species, causing headache, anorexia, slow heart rate and breathing difficulties. Conjunctivitis is also possible. Allergic reactions are aggravated by fungi and bacteria associated with wood. Cancers of the respiratory tract seem to be more common in those professions associated with the use of wood. This seems to be true for both hardwood and soft wood.

Wood dust may cause skin and respiratory sensitisation.

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

TEBUCONAZOLE:

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 4000 mg/kg Non-irritating to

Inhalation (rat) LC50: >800 mg/m³/4h

Dermal (rat) LD50: >5000 mg/kg

IRRITATION

eyes, skin. *

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 7 of 9

Section 11 - TOXICOLOGICAL INFORMATION

Oral (mouse) LD50: 2000 mg/kg

Oral (chicken) LD50: 4488 mg/kg

Oral (bird) LD50: >1000 mg/kg

[* The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor

Clive Tomlin, 1994, British Crop Protection Council].

(aerosol)

NOEL (2 y)* for rats, 300 mg/kg diet

for dogs, 100 mg/kg "

for mice, 20 mg/kg "

ADI 0.03 mg/kg b.w. *

Toxicity Class WHO III; EPA III *

WOOD DUST SOFTWOOD:

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

No data of toxicological significance identified in literature search.

WARNING: Inhalation of wood dust by workers in the furniture and cabinet making industry has been related to nasal cancer [I.L.O. Encyclopedia]

Use control measures to limit all exposures.

WARNING: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS.

MATERIAL	CARCINOGEN	REPROTOXIN	SENSITISER	SKIN
wood dust			AUOEL	
softwood				

SENSITISER

AUOEL: Australia Exposure Standards - Sensitisers: wood dust softwood

Section 12 - ECOLOGICAL INFORMATION

Although treated, the solid wood will decay on ground contact.

Refer to data for ingredients, which follows:

TEBUCONAZOLE:

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Azole-containing compounds produce profound effects in the environment. In part this is due to inhibition of several enzyme systems including those involving sterol 14[alpha]-demethylase. Sterol 14[alpha]-demethylase is a member of the superfamily of haeme-containing cytochrome P450 enzymes involved in metabolism of endogenous and xenobiotic substances. The antifungal effect of azoles is due to inhibition of sterol 14[alpha]-demethylase in fungi and yeast, thereby blocking the biosynthesis of ergosterol. The subsequent lack of ergosterol is detrimental because ergosterol is an essential sterol component in the membranes of fungi and yeast. Sterol 14[alpha]-demethylase is not only expressed in fungi and yeast but is also found in many other species ranging from bacteria to mammals. In plants, the sterol 14[alpha]-demethylase reaction metabolizes obtusifoliol and provides precursors for biosynthesis of phytosterols. In animals, the sterol 14[alpha]-demethylase reaction is part of the metabolic pathway leading to biosynthesis of cholesterol. Cholesterol in turn is the substrate for the production of many other sterols (e.g., the sex steroid hormones).

The DNA sequences encoding sterol 14[alpha]-demethylase of many fungi and yeast are known, as well as the sequences of mice, rats, pigs, and humans. On the protein level, the

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 8 of 9

Section 12 - ECOLOGICAL INFORMATION

amino acid sequences are highly conserved along the phylogenetic tree. This fact is considered by many authors as an indication of the pivotal role of sterol 14[alpha]-demethylase in all organisms. The homology of the amino acid sequence level between rats and humans is 93% and 40% between fungi and humans. In humans, the sterol 14[alpha]-demethylase is expressed in many different tissues.

Another important P450 enzyme involved in the steroidogenesis is aromatase. Like sterol 14[alpha]-demethylase, aromatase catalyzes the oxidative demethylation of sterols. In contrast to sterol 14[alpha]-demethylase, which has several substrates in different phyla, aromatase demethylates C10 and specifically converts androstenedione and testosterone. On the protein level, the amino acid sequence homology between aromatase from fish and humans is about 50% and between rats and humans is about 78%. In mammals, aromatase is mainly expressed in the brain and the gonads, but it is also found in placental, adipose, and bone tissue. The physiologic balance between different sex steroid hormones is crucial for the development, maintenance, and function of the reproductive system as well as for the differentiation of the sexual phenotype during ontogeny. Estrogens (estrone and estradiol) are products of the androgens (androstenedione and testosterone), and the reaction is catalyzed by aromatase. In mammals, differentiation of the male phenotype depends not only on testosterone but also on estradiol generated from testosterone by neuronal aromatase in central nervous system. Therefore, disturbances in aromatase expression and/or changes in its catalytic activity are expected to exhibit negative effects on reproduction parameters.

The triazine pesticides behave as weak bases in aqueous solution with pKa pH level, with triazines being more soluble at low pHs. Adsorption of triazines through an exchange process to organic matter and clay minerals is dependent on the pH of the solution and the acidity of the absorbent surface. Hydrogen bonding and hydrophobic bonding also occur with soil organic matter at higher pHs. Hydrolysis and oxidation are general routes of soil metabolism whilst photodecomposition appears to be minimal. Vapour transport losses are dependent on vapour pressure and the pH of the evaporating surface as ionised compounds are less volatile. Transport from soil to water occurs in solution and in sediments. Herbicide concentrations in excess of 5 ppb may play a part in the decline in submerged aquatic vegetation (SAV). However, recovery from exposure to these concentrations does occur as these herbicides degrade rapidly under estuarine conditions.

Residues do not appear to build up in sediments.

DO NOT discharge into sewer or waterways.

In plants tebucanazole was either not present or present in negligible quantities after administration to soil.

Degradation in soil was slow in laboratory studies. Under field conditions degradation was much more rapid.

Kow 5000

logP = 3.7

DT 50 (22 C, pH 4-9) >1 y

Ecotoxicology:

Toxic to fish and food-chain organisms.

Birds: Acute oral LD50 for male Japanese quail 4438 mg/kg

female Japanese quail 2912 mg/kg

bobwhite quail 1988 mg/kg

Fish LC50 (96 h) for rainbow trout 6.4 mg/l

for golden orfe (8.7 mg/l)

Non-toxic to bees

Daphnia EC50: (48 h) 10-12 mg/l

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.

continued...

CHH LOSP AZOLE TREATED PINE PLYWOOD, LVL AND I JOIST

Chemwatch Material Safety Data Sheet

Issue Date: 28-Jun-2007

NC317ECP

CHEMWATCH 4729-83

Version No:6

CD 2007/4 Page 9 of 9

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,
IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

CHH LOSP Azole Treated Pine Plywood, LVL and I Joist (CAS: None):

No regulations applicable

tebuconazole (CAS: 107534-96-3) is found on the following regulatory lists;

Australia Exposure Standards

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5

No data available for wood dust softwood as CAS: Not avail.

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
propiconazole	60207- 90- 1	Xn; R22

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
propiconazole	60207- 90- 1, 75881- 82- 2
permethrin	52645- 53- 1, 54774- 45- 7, 57608- 04- 5, 93388- 66- 0, 63364- 00- 1, 60018- 94- 2, 75497- 64- 2

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 28-Jun-2007

Print Date: 5-Feb-2008