



Vacsol[®] Azure (RTU) Material Safety Data Sheet

1. Identification of Substance and Company

Product

Product Name	Vacsol [®] Azure (RTU)
Other Names	Tan [®] Z
Product Code	TNZ-AZR-RTU, TNZ-AZRM-RTU, TNZ-AZRT-RTU
HSNO Approval	HSR000007
Proper Shipping Name	Wood preservatives, liquid
UN Number	1306
DG Class for Transport	3
Packaging Group	III
Hazchem Code	3YE
Uses	Water repellent preservative formulation for the impregnation of timber. Refer to NZS3640:2003 for penetration and retention requirements.
NOTE	To be labelled as "Marine Pollutant"

Company Details

Company	Arch Wood Protection (NZ) Ltd		
Address	265 James Fletcher Dr PO Box 22-148 Otahuhu, AUCKLAND	8 Penn Place PO Box 6124 CHRISTCHURCH	Scion Campus PO Box 6123 ROTORUA
Telephone Number	(09) 276 3646	(03) 348 5379	(07) 350 1680

Emergency Telephone Number: 0800-623-000

2. Hazard Identification

Hazard Classifications

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR000007), and is classified as follows:

Classes:

- 3.1C – Flammable liquid
- 6.1E – Harmful if swallowed
- 6.3B – Irritating to the skin
- 6.5A – Respiratory sensitiser
- 6.5B – Contact sensitiser
- 6.9B – Suspected target organ systemic effects toxicant
- 9.1A – Very ecotoxic in the aqueous environment
- 9.4B – Harmful to Terrestrial Invertebrates

SYMBOLS

DANGER



Other classifications

There are no other Classifications that are known to apply.

Safety and Risk Phrases

Hazard	Possible risk of irreversible effects. Irritating to skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Toxic to Bees.
Safety	Keep locked and out of the reach of children. Keep container tightly closed. Avoid contact with skin. Wear suitable protective clothing and gloves. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. If swallowed, do not induce vomiting: seek medical advice immediately and show container label. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.



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Acute Effects

Swallowed	Ingestion of the mixture may result in vomiting and aspiration of the solvents into respiratory system with mild to severe pulmonary injury and possibly death. Considered an unlikely route of entry in commercial/industrial environments.
Eye	The liquid is not considered to be an eye irritant.
Skin	The liquid is irritating to the skin. Liquid has a degreasing action to the skin. It can be absorbed through the skin with resultant systemic toxic effect.
Inhaled	Vapour is irritating to mucous membranes and the respiratory tract. Inhalation of vapour can result in headaches, dizziness and possible nausea, Inhalation of high concentrations can produce central nervous system depression.

Chronic Effects

Evidence indicates that repeated or prolonged exposure to solvents could result in peripheral and central neuropathy (nervous system damage). Repeated or prolonged skin contact can cause severe dermatitis. Not classified as a carcinogen.

3. Composition/Information on Ingredients

Chemical Entity	CAS No	Proportion w/w %
Propiconazole	60207-90-1	0.40-0.8
Tebuconazole	07534-96-3	0.40-0.8
Permethrin	52645-53-1	0.30-0.5
IPBC**	55406-53-6	0.00-0.60
Hydrocarbon additives	proprietary	<5%
White Spirits*	64743-95-6	balance

*White spirits is a mixture of 20% light aromatic petroleum solvent (CAS number 64742-95-6) and 80% medium aliphatic petroleum solvent (CAS number 64742-88-7).

** IPBC may be added to control surface mould - refer to Vacsol[®] Anti-Mould product data sheet.

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

Arch Wood Protection have an Emergency Contact Phone Number: 0800 623 000.

You should call the National Poisons Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities: Ready access to running water is required. Accessible eyewash is recommended. Emergency shower, hand wash, soap. CPR training, oxygen mask.

Exposure

Swallowed	DO NOT INDUCE vomiting. Never give anything by mouth to an unconscious person. If conscious, give water (or milk) to drink. Contact the National Poisons Centre or a Doctor immediately. If vomiting occurs, place victim face downwards with the head turned to the side and lower than the hips to prevent vomit entering the lungs.
Eye contact	Immediately hold the eyes open and wash continuously for at least 15 minutes with fresh running water. Ensure irrigation under eyelids by occasionally lifting the upper and lower lids. Remove contact lenses. Seek medical assistance if effects persist.
Skin contact	Immediately flush body and clothes with large amounts of water. Remove all contaminated clothing, including footwear (after rinsing with water). Wash affected areas thoroughly with water (and soap if available) for 15 minutes. Seek medical attention if a large area is affected or in event of irritation.
Inhaled	Remove to fresh air - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep victim at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply cardio-pulmonary resuscitation (CPR) if trained. Seek medical attention immediately.

Advice to Doctor

Treat symptomatically.



5. Firefighting Measures

Fire and explosion hazards	This product is a flammable liquid. The vapours may form an explosive mixture in air which may be ignited by many sources such as pilot lights, open flames, electrical motors, switches and static electricity.
Suitable extinguishing substances	Fires may be extinguished using foam, dry chemical or carbon dioxide. Water streams should not be used. Low velocity fog can be used to suppress fire or to keep nearby containers cool.
Unsuitable extinguishing substances	Water streams.
Protective equipment	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and preferably goggles.
Danger caused by material, its combustion products or gases produced	On burning, toxic products of combustion, including carbon monoxide may be emitted.
Further fire fighting advice	If safe to do so, remove nearby containers from path of fire.
Hazchem code	3YE

6. Accidental Release Measures

Containment	A site-specific emergency procedure taking into consideration release of this product may be required for storage of greater than 100L .
Emergency procedures	Shut off all possible sources of ignition. Contain - prevent run off into drains and waterways. Wear suitable protective equipment to prevent skin, eye and respiratory exposure. Restrict access to contaminated area. Recover free liquid. Contain using sand or absorbent material. Increase ventilation.
Clean-up method	Absorb remainder with sand, earth or vermiculite. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Dispose of only in accord with all regulations (Resource Management Act). Approval should be sought from the regional authority. Refer to District plan.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.
Note	This product is toxic to fish.

7. Handling And Storage

Storage	Supplied in bulk by tanker. Bulk tanks must bear the prescribed labelling, including the Hazchem code, UN number, flammability warning and name of contents. MSDS sheet must be available. Store away from incompatible materials described in Section 10. Store in a cool, dry, area with sufficient natural/mechanical ventilation to avoid airborne hazards. Store away from sources of heat or ignition and oxidising agents. Keep out of reach of children.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

8. Exposure Controls/Personal Protection Equipment

Workplace Exposure Standards

There are no WES or TLV values available for this mixture. However, given that the main constituents are pesticides with potential acute and chronic effects, workplace exposures should be kept as low as reasonably achievable by the use of engineering controls and correct personal protective equipment.






NZ Workplace Exposure Standards (OSH, 2002).	Ingredient	WES- TWA (mg.m ⁻³)	WES- STEL
	Permethrin	Data unavailable Manufacturer recommends: 3 mg/day	Data unavailable
	White spirits	525 mg.m ⁻³ (100ppm)	Data unavailable

Engineering Controls

Processes should be designed in such a way as to isolate employees from source of release and to minimise employee exposures. Use in an area with sufficient natural or mechanical ventilation to avoid airborne exposure hazards. Local exhaust (extract) ventilation, such as a spray booth, is the preferred method. In confined spaces, volatile solvent vapours are heavier than air – prevent concentration build-up in hollows or sumps. Do NOT enter confined spaces where vapour may have collected.

Keep product away from waterways.

Personal Protective Equipment

Eyes		Observe good work practices. Avoid contact with eyes. Use safety glasses and or chemical splash goggles.
Skin	  	Avoid repeated or prolonged skin contact. Wear overalls with long sleeves, rubber boots and impervious protective gloves (e.g. nitrile rubber, neoprene, PVA, PVC, or NBR), impervious apron, and a face shield when handling the product. Care must be taken to prevent the insides of clothing from becoming contaminated.
Respiratory		If risk of airborne hazard exists, wear SAA approved respirator (air purifying type). SAA approved respirator (supplied air type) may be required in special circumstances. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.
General		Always wash hands before smoking, eating, drinking or using the toilet.

9. Physical And Chemical Properties

Appearance	Amber coloured clear liquid
Odour	Characteristic petroleum odour
pH	Not applicable
Vapour pressure	10mmHg @ 20°C for white spirits
Boiling point	> 149°C
Softening/melting point	Not applicable
Solubility	Not soluble in water
Specific gravity or density	~0.79 g/ml @ 20°C
Flash point	39.5°C
Danger of explosion	Not explosive
Auto ignition temperature	No data for mixture
Upper and lower flammable limits	No data for mixture, 0.9-6% for white spirits
Corrosiveness	Not corrosive



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10. Stability And Reactivity

Stability	Stable - unlikely to react/decompose under normal conditions. Liquid is flammable.
Conditions to be avoided	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
Incompatible materials	Oxidising agents, ignition sources.
Hazardous decomposition products	May emit acrid and toxic fumes of carbon, nitrogen oxides and sulphur oxides when heated to decomposition.
Hazardous reactions	No specific hazards.

11. Toxicological Information

Summary

Limited data on the mixture.

Supporting Data

Acute	Oral	No data for mixture is available. Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (oral, rat) for the mixture is > 5000 mg/kg. Data considered includes: Propiconazole 1517 mg/kg, Tebuconazole 1700 mg/kg, Permethrin 1479 mg/kg, White Spirit >5000 mg/kg, Butyl Oxitol 300 mg/kg. However the solvent is considered an acute oral toxicant by aspiration.
	Dermal	No data for mixture is available. Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (dermal, rat) for the mixture is >2,000 mg/kg. Data considered includes: Propiconazole >4000 mg/kg, Tebuconazole >5000 mg/kg, Permethrin 1750 mg/kg, Butyl Oxitol 210 mg/kg
Chronic	Inhaled	No data for mixture is available. Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (inhalation, rat) for the mixture is >5,000 ppm. Data considered includes: Propiconazole 5800 mg/m ³ /4h, Tebuconazole 800 mg/m ³ /4h, Permethrin 485 mg/m ³ /4h, Butyl oxitol 2.21 mg/L.
	Eye	The mixture is not considered to be an eye irritant.
	Skin	The mixture is considered to be a skin irritant, because some of the ingredients present are considered skin irritants in more concentrated form.
	Sensitisation	The mixture is considered to be a contact and respiratory sensitizer, because at least one of the ingredients (permethrin) present in greater than 0.1% is known to be a contact and respiratory sensitizer.
	Mutagenicity	No data for mixture is available. No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No data for mixture is available. No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	The mixture is not considered to be a suspected reproductive or developmental toxicant. No ingredient present in greater than 0.1% is considered to be a reproductive or developmental toxicant.
Systemic	The mixture is considered to be a known or presumed target organ toxicant, because at least one of the ingredients present in greater than 1% is known or presumed to be a target organ toxicant.	
	Aggravation of existing conditions	None known.



12. Ecological Data

Summary

No specific data is available for this product. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below.

Supporting Data

Aquatic	No data for the mixture. Propiconazole, tebuconazole and permethrin are toxic to fish. The mixture is classified as 9.1A – very ecotoxic in the aquatic environment. Data considered includes: Permethrin 0.0006 mg/L.
Bioaccumulation	No data for the mixture.
Degradability	No data for the mixture.
Soil	It is not classified as ecotoxic to the soil environment by HSNO.
Terrestrial Vertebrate	It is classified as ecotoxic to terrestrial vertebrates (9.3C) by HSNO.
Terrestrial Invertebrate	No data for the mixture. Permethrin is extremely toxic to bees. The mixture is classified as 9.4B, ecotoxic towards terrestrial invertebrates. Data considered includes: 0.029 µg/bee for permethrin.
Biocidal	This product is intended to be used as a wood preservative.

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Consult Arch Wood Protection for recycling options. Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated Packaging	Usually not applicable – supplied by bulk tanker only. If product is stored in steel drum, empty drums are to be returned to Arch Wood Protection accompanied by an empty drum D.G. form.

14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land).

UN Number	1306	Proper Shipping Name	Wood preservatives, liquid
Class(es)	3	Packing group	III
Precautions	Marine Pollutant	HAZCHEM code	3YE

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR000007.

Specific Workplace Controls

Key workplace requirements are:

MSDS	To be available within 10 minutes in workplaces storing > 0.1L.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Flammable zone	Must be established when using or storing > 1L.
Emergency plan	Approved Evacuation Scheme required if > 100L is stored.
Bunding and secondary containment	Required if > 100L is stored.
Signage	Required if > 100L is stored in any one location.

Other Legislation

No data



16. Other Information

Abbreviations

CAS Number	Unique Chemical Abstracts Service Registry Number
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g., T1, I16).
EC₅₀	"Ecotoxic Concentration 50%" – concentration in water which is fatal to 50% of a test population (e.g., daphnia, fish species).
ERMA	Environmental Risk Management Authority
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LD₅₀	"Lethal Dose 50%" – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	"Lethal Concentration 50%" – concentration in air which is fatal to 50% of a test population (usually rats).
MSDS	Material Safety Data Sheet (or Safety Data Sheet)
NICNAS	Australian National Industrial Chemicals Notification and Assessment Scheme
NTP	National Toxicology Program (USA)
OSH	The Occupational Safety and Health Service of the Department of Labour (NZ)
R-Phrase	Risk phrase
SUSDP	Australian Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number
WES	Workplace Exposure Standard

References

Data	Unless otherwise stated comes from IUCLID datasheet for the specific chemical
Controls Matrix	Part of the ERMA New Zealand User Guide to the HSNO Control Regulations
HSR00007	HSNO Approval to import or manufacture Vacsol Azure under Section 28A92)(b) of the Hazardous Substances and New Organisms Act 1996. Available on the ERMA web site – www.ermanz.govt.nz
NICNAS PEC12	NICNAS Priority Existing Chemical Report 12. Available on the NICNAS web site – www.nicnas.gov.au .
WES 2002	The NZ Workplace Exposure Standards Effective from 2002, published by OSH and available on their web site – www.osh.dol.govt.nz .

Disclaimer

This MSDS was prepared by HaS Expertise (consultants in hazardous substances, health and safety) and is based on our current state of knowledge, including information obtained from suppliers.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Arch Wood Protection (NZ) Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.