



TANALITH[®] C Oxide

Material Safety Data Sheet

1. Identification of Substance and Company

Product

Product Name Tanalith[®] C Oxide
Other Names Tanalised[®] C Oxide, Copper Chrome Arsenic Wood Preservative, 60% w/w
Product Code CCA-OXD
HSNO Approval HSR000835
Proper Shipping Name Arsenical pesticide, liquid, toxic
UN Number 2994
DG Class for Transport 6.1
Packaging Group III
Hazchem Code 2XE
Poison Schedule S2
Uses Type 1 preservative used for the pressure impregnation of timber.
Retention is to be in proportion to the hazard class to which the timber is exposed in accordance with approved standards.

NOTE

To be labelled as a "Marine Pollutant"

Company Details

Company Arch Wood Protection (NZ) Ltd
Address 265 James Fletcher Dr 8 Penn Place Scion Campus
PO Box 22-148 PO Box 6124 PO Box 6123
Otahuhu, AUCKLAND CHRISTCHURCH 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 is a transferred hazardous substance under the HSNO act (ERMA approval code HSR 000835) and has been classified as follows:

Classes:

- 6.1B - Toxic by ingestion, inhalation and by contact
- 6.5A - Respiratory sensitizer
- 6.5B - Contact sensitizer
- 6.6A - Mutagen
- 6.7A - Carcinogen
- 6.8A - Human reproductive toxicant
- 6.9A - System organ toxicant
- 8.1A - Corrosive to metals
- 8.2B - Corrosive to skin
- 8.3A - Corrosive to eyes
- 9.1A - Ecotoxic in the aquatic environment
- 9.2B - Ecotoxic in the soil environment
- 9.3A - Toxic to terrestrial vertebrates
- 9.4C - Harmful to terrestrial invertebrates

SYMBOLS:

DANGER



Other classifications

There are no other Classifications that are known to apply.



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Safety and Risk Phrases

Hazard	Toxic by ingestion, inhalation and in contact with skin Causes burn Danger of very serious irreversible effects Risk of serious damage to eyes May cause sensitization by inhalation and skin contact May cause cancer May cause heritable genetic damage May impair fertility Very toxic to aquatic organisms Toxic to flora Toxic to fauna Toxic to bees
Safety	Keep out of reach of children. Avoid contact with skin and eyes. If swallowed, do not induce vomiting: seek medical advice immediately and show container or label. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not release to the environment.

Acute Effects

Swallowed	Ingestion of Arsenic causes restlessness, nausea, vomiting, dizziness, chills, irritability and variable paralysis which may progress over a period of weeks. Ingestion of Chromium may cause symptoms of nausea and vomiting.
Eye	Burning sensation, irritation or conjunctivitis.
Skin	Irritating and corrosive to skin which may cause dermatitis, ulceration or skin sensitisation.
Inhaled	Inhalation of mist or spray may result in severe irritation of nose, throat, bronchial tubes and lungs.

Chronic Effects

This product contains ingredients that **may cause cancer**. Prolonged contact with high levels of this product may give rise to the risk of cancer.

3. Composition/Information on Ingredients

Chemical Entity	CAS No	Proportion % w/w
Cupric Oxide	1317-38-0	10-12%
Chromium Trioxide	1333-82-0	29-32%
Arsenic Pentoxide dihydrate, as Arsenic Acid	7778-39-4	19-21%
Water	7732-18-5	Remainder

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. Rest bed.

Exposure

Swallowed	Do not induce vomiting. Give about 500ml of milk followed by plenty of water to be sipped slowly. Contact Doctor or Poisons Information Centre immediately.
Eye contact	Remove contact lenses. Hold eye open and wash continually with water for at least fifteen minutes. If irritation persists following washing then contact Doctor.
Skin contact	Remove contaminated clothing including footwear. Wash skin thoroughly using soap and water. If irritation or any discomfort continues following washing, contact Doctor.
Inhaled	Remove person to uncontaminated area. Lay person down and rest. If any symptoms persist or develop, seek medical advice.



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Advice to Doctor

In cases of suspected poisoning by ingestion, treat for Arsenic poisoning; intubate stomach, aspirate and lavage, then administer appropriate dosage of activated charcoal including a cathartic. If poisoning is acute or ingestion more than 48 hours previous, use chelation therapy, nutritional supplements and maintain fluid intake.

5. Firefighting Measures

Fire and explosion hazards	There are no specific risks for fire/explosion for this chemical. This substance will not burn.
Suitable Extinguishing Substances	This product does not burn. Use extinguishing media suited to the materials that are burning.
Unsuitable extinguishing substances	None known.
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	May emit toxic fumes in a fire.
Further Fire Fighting Advice	Keep tanks or drum cool with water.
Hazchem Code	2XE

6. Accidental Release Measures

Containment	A site-specific emergency procedure taking into consideration release of this product is required for storage of greater than 100L .
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Wear full protective equipment including breathing apparatus to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Recover as much solution as possible to a suitable tanker or container for recycling or disposal. Absorb remaining material using sand or vermiculite and lime and cement. Collect and seal in properly labelled containers or drums for disposal.
Disposal	Disposal of this product must comply with the requirements of the Resource Management Act, for which approval should be sought from the Regional Authority. Recover as much as possible back into the treatment system. Empty drums are to be thoroughly washed. For the purposes of transportation all containers must be "triple rinsed" to be deemed as clean. Contaminated water is to be recycled through the treatment plant.
Precautions	Wear protective equipment to prevent skin and eye contamination. Work up wind or increase ventilation. Decontaminate and launder all protective clothing and equipment.
Note	Burning treated timber is NOT recommended. However, if burying is impracticable timber should be burnt in open area or suitable incinerator as approved by Local Council. Ash residue will contain soluble toxic elements and must be disposed of to an approved landfill.

7. Handling And Storage

Storage	Supplied in bulk by tanker, in 1000L IBC or in 200 litre drums. Drums to be stored unopened in secure, labelled, well-ventilated and bunded area away from foodstuffs. Bulk tanks must bear the prescribed labelling, including the Hazchem code, UN number 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. Keep out of reach of children and unauthorised persons.
Handling	Observe Arch Wood Protection Code of Practice for Safe Storage and Handling of TANALITH [®] Preservatives. 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. Protect drums or storage tanks from physical damage and check regularly for leaks and spills.

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
	Arsenic pentoxide	0.2	Data unavailable
	Chromium(IV)	0.05 mg/m ³	Data unavailable
	Copper as Cu, dust or mist	1.0 mg/m ³	Data unavailable

Engineering Controls

Ventilate confined spaces thoroughly before entry. Use forced air breathing apparatus if mist or vapour is present. Keep product away from waterways. Use forced air breathing when welding. Fumes are toxic. **Keep product away from waterways.**

Personal Protective Equipment

Eyes		Protect eyes with goggles, safety glasses or full face mask. Avoid wearing contact lenses.
Skin		Wear gloves (neoprene, PVA or PVC), waterproof apron, overalls. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking.
	  	
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		Use good occupational work practices. The concentration, quantity and conditions under which the product is used will affect the degree of protection necessary. Do not eat, drink or smoke when using this product. Ensure that there is access to an eyewash unit and safety shower. Wash protective clothing separate from household laundry.

9. Physical And Chemical Properties

Appearance	Clear dark brown solution with slight metallic odour
Odour	slight metallic odour
pH	0.6
Vapour pressure	No data for mixture
Boiling point	No data for mixture
Softening/melting point	No data for mixture
Solubility	Completely soluble/dispersible in water, slight to moderate solubility in other polar solvents
Specific gravity or density	1.72 – 1.84 g/L @ 20°C
Flash point	Not combustible
Danger of explosion	Not explosive
Auto ignition temperature	Not flammable
Upper and lower flammable limits	Not flammable
Corrosiveness	Corrosive



10. Stability And Reactivity

Stability	Considered to be stable
Conditions to be avoided	Strong alkalis and acids, oxidising agents and halogens
Incompatible materials	Some metals, e.g. aluminium, zinc or galvanised iron
Hazardous decomposition products	Produces toxic gas on reaction with incompatible materials
Hazardous reactions	Avoid reaction with strong alkalis and acids, oxidising agents and halogens. Reacts with some metals, e.g. aluminium, zinc or galvanised iron and potentially could produce toxic gas.

11. Toxicological Information

Summary

Limited data on the mixture. The mixture is acutely and chronically toxic.

Supporting Data

Acute	Oral	LD ₅₀ (oral, rat) 250 mg/kg for the mixture.
	Dermal	LD ₅₀ (dermal, rat) 800 mg/kg for the mixture.
	Inhaled	No LC ₅₀ available for mixture. Unlikely route, but Tanalith C oxide is known to be toxic by inhalation.
Chronic	Eye	The mixture is classified by ERMA as 8.3A, corrosive to the eye.
	Skin	The mixture is classified by ERMA as 8.2, corrosive to the skin.
	Sensitisation	The mixture may cause sensitisation by inhalation and by skin contact. The mixture is therefore classified as 6.5A and 6.5B by ERMA.
	Mutagenicity	Arsenic pentoxide is a mutagen. The mixture is classified by ERMA as 6.6A – confirmed mutagen.
	Carcinogenicity	Arsenic pentoxide is a confirmed carcinogen. The mixture is classified by ERMA as 6.7A – confirmed carcinogen.
	Reproductive / Developmental	Arsenic pentoxide has been shown to have a paternal effect. The mixture is therefore classified as 6.8A - human reproductive toxicant. No evidence of developmental toxicity for the mixture or any of its components (>0.1%).
	Systemic	No data for the mixture, but there is evidence that indicates that repeated or prolonged exposure to the solvent (carrier) could result in peripheral and central neuropathy (nervous system damage).
	Aggravation of existing conditions	None known

12. Ecological Data

Summary

This product is considered very ecotoxic in water.

Supporting Data

Aquatic	Chromium trioxide and copper are very toxic to aquatic organism at low concentration. The mixture has been classified by ERMA as ecotoxic in the aquatic environment, 9.1A.
Bioaccumulation	No data for the mixture
Degradability	No data for the mixture
Soil	Chromium trioxide is very toxic to organisms in the soil and higher plants. The mixture has been classified by ERMA as ecotoxic in the soil environment, 9.2B.
Terrestrial Vertebrate	The mixture has an LD ₅₀ (Oral, rat) of 250mg/kg and is classified by ERMA as toxic to terrestrial vertebrate – 9.3A.
Terrestrial Invertebrate	No data available for the mixture. ERMA has classified the mixture as harmful to terrestrial invertebrates – 9.4C.
Biocidal	This product is intended to be used as a timber preservative.



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13. Disposal Considerations

Restrictions	As per control matrix. There are no product-specific restrictions however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act, for which approval should be sought from the Regional Authority. Recover as much as possible back into the treatment system. Unrecoverable, residual amounts may be flushed away with large quantities of water provided that Regional Authority approval is granted based on maximum concentration limits not being exceeded in waste. Dispose of empty containers safely. Empty drums must be washed out in water and the washings recycled through the treatment system.
Contaminated Packaging	Rinse containers with water before disposal. Recycle the washings through the treatment system. Preferably re-cycle container, otherwise send to landfill or similar.

14. Transport Information

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

UN Number	2994	Proper Shipping Name	Arsenical pesticide, liquid, toxic
Class(es)	6.1	Packing group	III
Precautions	Marine Pollutant	HAZCHEM code	2XE

15. Regulatory Information

Transferred substance, ERMA approval code: HSR000835

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

MSDS	To be available within 10 minutes in workplaces storing > 1L.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Flammable zone	Not applicable
Emergency plan	Approved Evacuation Scheme required if > 100L is stored.
Bundling and secondary containment	Required if > 100L is stored.
Signage	Required if > 100L is stored in any one location.
Tracking	Tracking is required for this substance
Approved Handler	Approved handlers are required for the use of this substance

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
HSR000835	HSNO Approval code. Available on the ERMA web site – www.ermanz.govt.nz
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.