



Form HS1 Import or Manufacture any Hazardous Substance for Release

under section 28 of the Hazardous Substances and New Organisms Act 1996

Send by post to: Environmental Protection Authority, PO Box 131, Wellington 6140 OR email to: info@epa.govt.nz
Payment must accompany application; see our fees and charges schedule for details.

Name of Substance(s)

ORD-X170

Applicant

Osmose New Zealand

Date

APPLICANT CHECKLIST

Mandatory sections filled out

Appendices enclosed

Fees Enclosed

Signed and dated

OFFICE USE ONLY

Application Code

Date received

EPA Contact

Initial Fees Paid \$

Application Version No

1. Applicant Details

1.1. Name and postal address in New Zealand of the organisation making the application:

Name: Osmose New Zealand
Address: PO Box 88 048, Clendon, Manukau, Auckland 2242
Phone: (09) 277 7770
Fax: (09) 277 8011

1.2. The applicant's location address in New Zealand (if different from above):

Address: 14 Mayo Road, Wiri, Auckland

1.3. Name of the contact person for the application:

This person should have sufficient knowledge to respond to queries and either have the authority to make decisions on behalf of the applicant that relate to processing the application, or have the ability to go to the appropriate authority.

Name: Jeanette Drysdale
Position: Consultant
Address: PO Box 72 275, Papakura 2244
Phone: 09 299 9435
Fax: 09 299 6434
Email: drysdale_ja@xtra.co.nz

Signature

Date

2. Application Type and Related Approvals Required

2.1. Is the information in this application relevant to import, manufacture or both:

Import only? **No**

Manufacture only? **No**

Import and manufacture? **Yes**

If import only, indicate whether or not manufacture is likely in New Zealand **Not applicable**

2.2. If the information in the application relates to manufacture in New Zealand, provide information on the proposed manufacturing process and any alternatives.

Details of the composition of the ORD-X170 and the manufacturing method are given in the *Confidential Appendix, Section 1*.

2.3. If you have reasons for not providing detailed information in this application, explain what they are and provide some justification.

The ORD-X170 will have with limited exposure to the public. The intended use is limited to an industrial closed system or process. The ORD-X170 will be imported and then stored at an industrial site, or manufactured at a manufacturing site in New Zealand and would then be transported between sites and stored at industrial timber treatment sites. The ready-to-use ORD-X170 solution would then be prepared at the treatment facility (by dilution with water). These facilities are purpose designed and have operational procedures in place to protect people and the environment. The potential risks are well-understood and can be well-managed by controls, including controls set in other legislation.

The ORD-X170 fits the criteria of a Category A application and could be considered under the reduced risk criteria.

2.4. If this substance(s) needs an approval under any other legislation, has an application for this approval been made?

(Optional)

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3. Information on the Substance(s)

3.1. State the unequivocal identification of the substance(s).

The ORD-X170 concentrate contains 60% w/w copper carbonate and tebuconazole at 1.3 % w/w, formulated as an aqueous dispersion.

3.2. Provide information on the chemical and physical properties of the substance(s).

Table 1: Summary of Chemical and Physical Properties for ORD-X170

Property	Description
Appearance	Light green opaque aqueous based dispersion
Odour	Latex paint-like
pH	8.99 (as 1% dilution in water)
Specific gravity	1.78
Viscosity	378.672 mm ² /sec @ 20 °C
Solubility in water	Miscible

Confidential Appendix, Section 1.

3.3. Provide information on the hazardous properties of the substance(s).

A summary of the hazardous classifications for the ORD-X170 substance is given in the table that follows. Information on the components in the formulations and the reasoning/justification for in the hazardous classifications for ORD-X170 is provided in the *Confidential Appendix, Section 2.*

Table 2: Summary of the hazardous properties for the ORD-X170

Class	Category	Justification
Class 1 : Explosives	Not triggered	No components in substance with Class 1 classification
Class 3: Flammables	Not triggered	No components in substance with Class 3 classification
Class 5; Oxidisers	Not triggered	No components in substance with Class 5 classification
Class 6: Toxicity		
6.1 Acute toxicity	6.1E	<i>Confidential Appendix, Section 2</i>
6.3 Skin irritation	Not triggered	<i>Confidential Appendix, Section 2</i>
6.4 Eye irritation	6.4A	<i>Confidential Appendix, Section 2</i>
6.5 Sensitisation	Not triggered	<i>Confidential Appendix, Section 2</i>
6.6 Mutagenicity	Not triggered	No components in substance with 6.6 classification
6.7 Carcinogenic effects	Not triggered	No components in substance with 6.7 classification
6.8 Reproductive and Development effects	Not triggered	No components in substance with 6.8 classification
6.9 Specific target organ toxicity	6.9B	<i>Confidential Appendix, Section 2</i>
Class 8 : Corrosives		
8.1 Corrosive to metal	Not triggered	No components in substance with 8.1 classification
8.2 Corrosive to dermal tissue	Not triggered	No components in substance with 8.2 classification
8.3 Corrosive to ocular tissue	Not triggered	No components in substance with 8.3 classification

Class 9: Ecotoxicity		
9.1 Aquatic ecotoxicity	9.1A	<i>Confidential Appendix, Section 2</i>
9.2 Soil ecotoxicity	Not triggered	<i>Confidential Appendix, Section 2</i>
9.3 Vertebrate ecotoxicity	Not triggered	<i>Confidential Appendix, Section 2</i>
9.4 Invertebrate ecotoxicity	Not triggered	<i>Confidential Appendix, Section 2</i>

3.4. Identification of the default Controls on the substance(s).

A range of default controls are triggered by the hazardous property classification(s) attached to the substance. If you wish, you can list what these default controls are. If you don't provide this information, the EPA will do it for you. Regardless, you need to be aware of what the default controls are so that you can take them into account when assessing risks – see Section 4.

(Optional)

The Default Controls applicable to ORD-X170 are shown in Table 3. The relevant Controls specified in the HSNO Regulations will be implemented. It is noted that the Controls for the substance include for an Approved Handler and Tracking. These are triggered by the 9.1A classification. These Controls could be waived given the very specific purpose and use of the substance, i.e. only on industrial timber treatment sites.

Table 3: Default Controls triggered for ORD-X170

Hazardous classification	Default Controls	
TOXICITY		Toxic & Corrosive Substances; Classes (6,8,9) Controls regulations
6.1E	T1	Reg 11-27 Limiting exposure to toxic substances
6.4A	T2	Reg 29-30 Controlling exposure in places of work and other 'use' situations
6.9B	T4	Reg 7 Requirements for equipment used to handle substances
ECOTOXICITY	T7	Reg 10 Restrictions; toxic substances on passenger service vehicles
9.1A	T8	Reg 28 Controls for vertebrate poisons
		Ecotoxic substances; Classes 6,8 and 9 Controls regulations
	E1	Regs 32-45 Limiting exposure to ecotoxic substances
	E2	Regs 46-48 Restrictions on use of substances in application areas
	E5	Reg 5(2),6 Requirements for keeping records of use
	E6	Reg 7 Requirements for equipment used to handle substances
	E7	Reg 9 Quantities of ecotoxic substances that require approved handler
	E8	Reg 10 Restrictions , toxic substances on passenger service vehicles
		Identification ; Identification regulations
	I1	Regs 6,7,32-35, 36 (1)-(7) Identification requirements, duties of persons in charge, accessibility, comprehensibility, clarity and durability
	I3	Reg 9 Priority identifiers for ecotoxic substances
	I8	Reg 14 Priority identifiers for toxic substances

I9	Reg 18	Secondary identifiers for all hazardous substances
I11	Reg 20	Secondary identifiers for all ecotoxic substances
I16	Reg 25	Secondary identifiers for toxic substances
I17	Reg 26	Use of generic names
I18	Reg 27	Requirements for using concentration ranges
I19	Regs 29-31	Additional information requirements; incl. multiple packaging
I21	Reg 37-39, 47 –50	General documentation requirements
I23	Reg 41	Specific documentation requirements for ecotoxic substances
I28	Reg 46	Specific documentation requirements for toxic substances
I29	Regs 51,52	Signage requirements
I30	Reg 53	Advertising corrosive and toxic substances
Packaging; Packaging regulations		
P1	Regs 5, 6, 7 (1), 8	General packaging requirements
P3	Reg 9	Criteria that allow substances to be packaged to a standard not meeting Packing Group I, II, III
P13	Reg 19	Packaging requirements for toxic substances (Class 6)
P15	Reg 21	Packaging requirements for ecotoxic substances (Class 9)
PG3	Schedule 3	Packaging requirements equivalent to UN Packing Group III
Disposal ; Disposal Regulations		
D4	Reg 8	Disposal requirements for class 6,8 substances (toxics, corrosives)
D5	Reg 9	Disposal requirements for class 9 substances (ecotoxics)
D6	Reg 10	Disposal requirements for packages
D7	Regs 11, 12	Information requirements for manufacturers, importers, suppliers, and persons in charge
D8	Regs 13, 14	Documentation requirements for manufacturers, importers and suppliers, and persons in charge
Emergency Management; Emergency Management Regulations		
EM1	Reg 6,7, 9-11	Level 1 information requirements for suppliers and persons in charge
EM6	Reg 8 (e)	Information requirements for toxic substances
EM7	Reg 8 (f)	Information requirements for ecotoxic substances
EM8	Regs 12-16, 18-20	Level 2 information requirements for suppliers and persons in charge
EM11	Regs 25-34	Level 3 emergency management requirements; duties of person in charge, emergency response plans
EM12	Regs 35-41	Level 3 emergency management requirements; secondary containment
EM13	Reg 42	Level 3 emergency management requirements; signage
Tracking : Tracking Regulations		
TR1	Regs 4(1), 5,6	General tracking requirements
Approved Handlers; Personnel Qualification Regulations		
AH1	Regs 4-6	Approved Handler requirements (including test certificate and qualification requirements)

3.5. Provide information on what will happen to the substance throughout its whole life from its introduction into New Zealand, its uses, through to disposal.

Importation

The ORD-X170 is to be imported .

Transport & Storage

The ORD-X170 will be transferred by road to the applicants site and stored until shipped to the end-use customer.

Identification

Drums or IBC's will have a product label identifying the product, ingredients, priority identifiers (hazard classifications), warning and first aid information, manufacturer and contact details. In addition a Safety Data sheet would be available for the preservative (e.g. for the treatment company) and for the treated timber (e.g. for treatment company, merchants, builders, users).

Confidential Appendix, Section 3

Transport within NZ would be via road transport operators approved to handle products classified as ecotoxic and toxic. Although it is unlikely tanks would rupture or leak there is potential risk of a spillage in the event of a traffic accident. Under such circumstances site management would be by the emergency services (police, fire) to contain the spill and oversee the recovery of liquid and clean up.

The substance would be stored at the timber treatment facility within a bunded area either in the original packaging (drums, IBC) or in a storage tank.

Use

The ORD-X170 is a dispersion concentrate that requires dilution with water prior to the impregnation process used to treat the timber or wood product. The volume of dilute solution held on site can range from 20 000 litres to as much as 150 000 litres depending on the number of storage tanks, capacity of the treatment storage tanks and the size of the timber treatment vessel.

The ORD-X170 would be mixed then would be transferred via a metering pump into a tank with water, and mixed well, to achieve the desired final concentration.

Timber treatment facilities are required to meet or exceed the *Best Practice Guidelines for the Safe use of Timber Preservatives & Antisapstain Chemicals* (a copy can be downloaded from www.nztpc.co.nz).

The timber treatment process requires the timber, roundwood or other wood product to be preconditioned (dried) before placing into the treatment vessel. The wood is moved in and out of the vessel on bogies. This vessel is a cylinder that can be sealed to allow a vacuum to be drawn to expel air before the treatment solution is then

introduced into the cylinder and into the wood. The vacuum is then released and a pressure applied to the full cylinder of wood and solution. This pressure cycle forces the treating solution deeper into the wood. The pressure is then released and the solution drained and pumped back to the treating solution holding tank. A second vacuum is then drawn to remove any excess solution remaining in the cylinder and on timber surfaces. The treatment is in a closed system and typically these days is an automated process. The use of vacuum and pressure cycles can be varied for different types of wood products and to target specific net solution uptake ranges. The wood product has to be penetrated by the preservative solution and achieve the required concentration level of active ingredients. These requirements will vary with the end-use of the timber and are determined by the hazard classes described in the relevant timber treatment standards for the type of wood product, e.g. AS1604:2010 and NZS3640:2003.

Confidential Appendix, Section 4

When the freshly treated wood comes out of the treatment vessel it will be 'wet' or 'damp' but may be surface dry, i.e. not dripping. The wood is left on a protected area ('drip pad') until the timber is at a minimum surface dry and can be safely transported to a storage area or off site. The operators do not need come in direct contact with the treating solution or to handle freshly treated timber.

In-service use of treated timber

The copper and tebuconazole active ingredients are deposited in the timber by the treatment process. This combination and ratio of preservative actives is recognised as a water borne preservative and 'leach resistant' preservative type in treatment standards, e.g. NZS3640:2003 and AS/NZ1604:2010 series.

The handling and use of treated timber is well-documented with a safety data sheet and work place exposure limits set by the NZ Department of Labour, e.g. for wood dust.

Disposal

The empty packaging will be rinsed with clean water, with washings disposed of into the treatment system, and the containers recycled or crushed and disposed of locally.

Delivery by returnable IBC's to New Zealand sites means there will be no empty containers to dispose of. IBC's are rinsed with clean water and the washings returned to the treatment system. Damaged containers are washed, crushed and disposed of to an approved landfill.

The treated timber at the end of its service life, or off cuts, would be disposed of to an approved landfill licensed to accept preservative treated wood waste. The treated timber contains copper which will not biodegrade. Other components are biodegradable.

The burning of preservative treated timber is not recommended, nor for use for home heating fires or barbeques.

4. Risks, Costs and Benefits

4.1. Identify all of the potential risks, costs and benefits of the substance(s)

RISKS

The ORD-X170 substance has toxicity and ecotoxic hazardous classifications but will have with limited adverse exposure risks as the intended uses are in an industrial closed system or processes, i.e. only at industrial timber treatment plant sites.

The substance is not for retail sale nor likely to be accessible to the general public except as treated timber.

Potential risks arising from the use of the substance have been reviewed in-house and are based on long term knowledge from the manufacture and use of existing preservative systems. The potential adverse events that might arise during the life cycle of these substances are summarised in Table 4.

Table 4: Summary of potential adverse events

Life cycle step	Potential adverse event
Importation of substance & storage	<ul style="list-style-type: none"> * Leak or spillage of components * Labels missing or damaged * Incorrect information about material * Incorrect packaging * Material not meeting specification
Transport to industrial timber treatment site	<ul style="list-style-type: none"> * Spillage from transport accident resulting in exposure to people (eye or skin contact) or contamination of environment (water, soil) * Containers damaged or leaking * Transported with incompatible substances * Inadequate packaging or documentation * Fire
Storage at industrial timber treatment site	<ul style="list-style-type: none"> * Containers or tanks damaged or leaking * Stored with incompatible substances * Inadequate packaging, labelling or documentation

	<ul style="list-style-type: none"> * Access by unauthorised people, e.g. children * Fire
Application	<ul style="list-style-type: none"> * Incorrect dilution of concentrate (product out of specification) * Mixing or contamination with incompatible materials * Spillage outside of protected bunded or sealed area * Leak from storage tanks or piping * Use of treatment plant that is not up to minimum requirements of Best Practice Guideline document * Operator exposure, e.g. lack of adequate protective equipment, information, warnings * Breathing in mists as treatment vessel door is opened * Storage of freshly treated timber on an unprotected area or to rain
Use as treated wood	<ul style="list-style-type: none"> * Exposure (dermal contact) to freshly treated ('wet') timber * Timber not treated to specification * Leaching of active ingredients from treated timber * Timber used incorrectly (in use)
Disposal	<ul style="list-style-type: none"> * Disposing of concentrate or dilute to sewer, drain or waterway * Disposal of treatment chemical residues or sludges * Not rinsing drums before disposal * Use of drums or IBC 's for other products or for household use * Burning treated wood (BBQ's, heating fires)

These potential adverse events were then considered for possible risks that might arise taking into account the hazardous classifications for the substances. These possible risks are summarised in Table 5.

Table 5: Potential Adverse Effects and Possible Risks for the ORD-X170

Averse event	Possible causes	Exposure route	Possible risk
Unintentional release or spillage of substance to environment	<ul style="list-style-type: none"> • Transport accident (road) or shipping (across Cook Strait) resulting in spillage • Faulty or damaged containers or packaging • Spillage when transferring or diluting concentrate • Incorrect disposal of substances or residues 	<ul style="list-style-type: none"> • Contamination of waterways, sewers, seawater • Contamination of soil • Skin contact with substance • Splashes of liquid into eyes or rubbing eyes with contaminated hands or gloves or overalls • Air emissions or chemical residue in ash (from burning treated off-cuts) 	<ul style="list-style-type: none"> • Toxic effects to aquatic organisms (fresh and salt water) • Possible effects on soil ecosystem • Possible effects on native flora or fauna • Effects on human health (workers, bystanders) through inhalation, eye or skin contact • Effect on vertebrates (beneficial or non target species)
Short term exposure to substance by people	<ul style="list-style-type: none"> • Transport accident (road or sea) • Disposal of rinse water from containers • Faulty or damaged containers or packaging – warehouse staff, transport operator, user • Spillage when transferring concentrate or when diluting ready for use solution • Lack of adequate personal protective equipment – contact 	<ul style="list-style-type: none"> • Contact with skin or eyes • Inhalation of mist, aerosols • Ingestion of liquid (deliberate or by child or pet) 	<ul style="list-style-type: none"> • Effects on human health • Harmful toxic effect if ingested • Effects to eyes and skin

Long term exposure to substance	<p>with solution or freshly treated timber</p> <ul style="list-style-type: none"> • Large spillage with long term contamination • Lack of adequate personal protective equipment (workers) • Contact with freshly treated (wet) timber 	<ul style="list-style-type: none"> • Contamination of soil or waterway, storm water (oral, dermal, inhalation of dust) • Inhalation of mist, skin or eye contact with liquid 	<ul style="list-style-type: none"> • Toxic effects to aquatic organisms • Potential effects on native flora or fauna • Potential effects on soil ecosystem • Effect on vertebrates (beneficial or non target species) • Possible Chronic effects e.g. organs or systems

Environmental risks

If not prevented, or an adverse event controlled, a spillage of ORD-X170 would impact negatively on water ecosystems. The ORD-X170 triggers a 9.1A aquatic classification. Any spillage has the potential to lead to contamination of sewers, soil or ground water. The substance is miscible in water, and adverse effects might eventuate for aquatic organisms. Care will need to be taken during any transfer/pumping/mixing process at the timber treatment plant.

Environmental contamination could result from treated timber as it exits the timber treatment vessel. However industry best practice requires timber to be left on a drip pad or on in protected area until the timber is drip free. The use of the ORD-X170 poses no additional hazard to existing industrial timber treatment application practices.

Health risks

Public health effects

Adverse public health effects could arise in the event of transport accidents that impact on people (the drivers and passengers of any vehicles involved), bystanders and emergency services. The ORD-X170 could be transported

in drums or IBC's . The substance is classified as 6.1E (for acute toxicity), 6.4 A (eye irritant) and 6.9B (suspected target organs systemic toxicant).

Exposure to spillages could result in health effects if person's were not wearing personal protective equipment. Exposure to eyes could cause eye irritancy. However the use of drums or IBC's with identifying labels and hazard symbols should alert people to the danger that the liquid is a hazardous substance and precautions should be taken.

The use in restricted access, purpose built timber treatment facilities limit the risk of public access resulting in inadvertent oral ingestion, dermal or eye contact at the location where these products are to be stored and used for timber impregnation.

Worker/operator /handler health effects

The treatment plant facilities are on industrial sites and are well-ventilated. It is unlikely that any emissions or aerosols would build up in a confined space and pose a health risk, e.g. eye irritancy. The substance also has a chronic health hazardous classification (6.9B) that will need to be managed by good occupational and operational work practices.

The ORD-X170 concentrate requires dilution with water prior to use but will be used in a 'closed application system' in purpose built timber treatment facilities on industrial sites that have limited access. Preparation of the wood preservative treating solution is by metering pump by mixing the ORD-X170 with water. No operators would directly handle the concentrate preservative. Plant operators would need to take care to prevent personal contamination when unloading the treatment vessel or from direct skin contact with freshly treated wet timber. Gloves, boots, overalls, goggles and an impervious apron are typical protection clothing worn at timber treatment plants when there is a risk of contact with liquids or where there is potential for contact with freshly treated 'wet' timber. Workers at the treatment sites have low exposure risks provided protective equipment is used.

COSTS AND BENEFITS

Indirect costs

Costs that could be attributable to use of these substances would be a consequence of a spillage from a transport accident, or treatment vessel or storage tank leaking or failing. The cost of any spillage adversely affecting the environment or people will be determined by the volumes involved and costs in cleaning up.

The active ingredients are already used in New Zealand and no additional indirect costs have been identified from previous uses with other types of copper-based timber preservatives.

Direct costs

The ORD-X170 is an alternative to other copper-based wood preservatives that contain ammonia or ethanolamine. Having a lower hazard (to people) and cost effective preservative formulations available assists the treatment industry remain competitive in domestic and export markets.

The potential future users (timber treatment sites) in New Zealand already have water based preservative treatment plant facilities. Investment may be required to install another storage tank which may also necessitate extending the bunded area (in which these tanks sit).

No specific disposal costs have been identified for these substances that would not apply to other copper based preservative systems. Drums or IBC's are rinsed with water and washings are recycled through the treatment system. Any solid timber waste produced, e.g. sawdust, shavings or treated timber at the end of its service life, would be disposed of to an approved landfill in accordance with local Council requirements.

Benefits

There are many timber preservative formulations as alternatives to copper-chrome-arsenate (CCA) already available in New Zealand. The earliest alternative formulations used ammonia (with undesirable side effects of odour and instability if the ammonia concentration dropped) and this was followed by formulations with a high ethanolamine concentration as an alternative solubilising agent. The copper was usually a copper oxide or salt. Newer formulations use finely ground copper compounds (micronized copper) that is formulated as a dispersion and this allows solvents with hazardous properties to be removed.

It also remains important to maintain cost effectiveness as a wood preservative option by the choice of best cost raw materials and manufacturing methods, optimising concentrations of active ingredients in the liquid concentrates (to minimise transport costs) and to have formulations that are stable and can be mixed using existing equipment at the timber treatment facilities.

4.2. Provide an assessment of those risks, costs, and benefits identified in Section 4.1 which might be significant.

Section 3.4 above and 4.5 below).

The risks that are likely to be significant are from (1) a spillage of any of the substances resulting in contamination of soil and/or a waterway and possible involuntary exposure to bystanders, and (2) exposure to timber treatment operators to the treating solution by direct contact with the liquid or to the freshly treated (wet) timber surfaces.

These risks have been summarised in Table 6.

No additional direct or indirect costs have been identified. The ORD-X170 would be a replacement for existing products so existing equipment and facilities can be used.

The ORD-X170 is the result of formulation and manufacturing improvements to optimise concentrations of active ingredients in the liquid concentrates (to minimise transport costs) and to have formulations that are stable and can be mixed using existing equipment at the timber treatment facilities.

Table 6: The magnitude of risk arising from most likely potential events

Event that leads to exposure	Distribution of effects (geographic)	Distribution of effects (demographic)	Distribution of effects (temporal)	Reversible/ Irreversible	Voluntary/ Involuntary	Magnitude (Consequence)
Accidental discharge into water or onto land from spillage	Localised	Users Community	Short to long term (depending on size of spillage and receiving environment)	Reversible/ Irreversible	Involuntary	Minimal - minor
Bystander exposure (spillage)	Localised	Community	Short term	Reversible	Involuntary	Minimal
Occupational exposure	Localised	Manufacturing workers Users	Short term	Reversible	Voluntary	Minimal
Incorrect disposal	Localised	Community	Short term	Reversible	Involuntary	Minimal

Definition of the Magnitude descriptions used to assess the qualitative magnitude of risk

Description	Definition
Minimal	Mild, reversible effect on human health (1-2 people) Environmental effects highly localised/contained- minimal environmental impact
Minor	Mild, reversible effect on human health (up to 10 people) Environmental effects localised and minor - reversible environmental impact
Moderate	Reversible, adverse effect on human health (> 10 people) Environmental effects localised and moderate - reversible environmental impact
Major	Serious, reversible, adverse effect on human health (>10 people) Significant, irreversible, adverse effect on human health (up to 10 people) Environmental effects localised and irreversible - no species loss
Massive	Serious, irreversible, adverse effect on human health (> 10 people) Environmental effects widespread and irreversible - species loss

4.3. Provide an assessment of any particular risks, costs and benefits which arise from the relationship of Māori and their culture and traditions with their taonga, or which are, for other reasons, of particular relevance to Māori.

We have asked for a separate response in this area because these requirements are different to other risks, costs and benefits. Please note that if there are potentially significant risks in this area, it will almost certainly be necessary to consult with Māori in preparing an assessment.

Osrose New Zealand are not aware of any adverse impact that the manufacture and use of ORD-X170 and dilutions of this substance, would have on Maori cultural, spiritual, ethical or socio-economic values .

The active ingredients, copper carbonate and tebuconazole , are already used separately or in combination in other wood protection products approved in New Zealand. Approval of these new substances therefore introduces no new components, but is an improved combination of existing active ingredients.

Application of the diluted ORD-X170 into timber or wood products is in a controlled closed system. The significant risk to be controlled is to avoid contamination of aquatic environments. The industrial sites that would use this product are required to have resource consents that will effectively manage any existing or potential issues that might impact on Treaty of Waitangi issues.

Osrose New Zealand believe this substance can be imported, stored, transported and used safely for the purposes intended without adverse effects on issues concerning traditional food sources or natural resources.

4.4. Provide an assessment of any risks, costs or benefits to New Zealand's international obligations.

This is a specialist area which the EPA will handle. However, any information you are able to provide on relevant international agreements would help us and save time and cost.

(Optional)

Osrose NZ is unaware of any relevant international agreements that would affect the substances in this application.

4.5. Provide information on the proposed management of the substance.

The lifecycle of the ORD-X170 (and dilutions of the latter) is described in Section 3.5. The ORD-X170 would be transported to the timber treatment sites for storage and then dilution with water to prepare the ready-to-use treating solution.

The relevant Controls specified in the HSNO Regulations will be implemented. It is noted that the Controls for the substance include for an Approved Handler and Tracking. These are triggered by the 9.1A classification. These Controls could be waived given the very specific purpose and use of the substance, i.e. only on industrial timber treatment sites.

In addition other relevant regulations for these substances are as follows:

Resource Management Act 1991

The Osmose New Zealand manufacturing/storage site and those industrial timber treatment sites using this product are required to operate with consents specific to that location.

Land Transport Act 2005

The substances will be packaged according to the requirements for UN Packing Group III. Only suppliers providing containers certified to the UN specification will be used.

Transport of these substances will be by operators who comply with New Zealand licensing requirements to carry dangerous goods. Osmose New Zealand will provide an Emergency response guide and Safety Data Sheet with each despatch of goods.

The requirements of NZ5433:2012, Transport of Dangerous Goods on Land, will be followed. These include controls for labelling, storage, packaging size and type. The ORD-X170 would be transported as UN3082, Class 9, ENVIRONMENTALLY HAZARDOUS LIQUID (CONTAINS COPPER CARBONATE).

Health and Safety in Employment Act 1992

This legislation covers the need to safeguard employee's safety and well-being.

Information and guidance (Codes of Practices) on the safe use of hazardous substances is available on the OSH website: www.osh.dol.govt.nz. Workplace exposure standards are available for copper.

Supplementary to all the above, Osmose New Zealand provide technical data sheets and on-site training to operators handling their products. This ensures operators routinely using the product are aware of the controls necessary to safeguard their own health but also to protect the general public and the environment.

Customer sites are industrial sites, purpose built and required to be operated to be compliant with the Best Practice Guideline for Timber Treatment Chemicals (<http://www.epa.govt.nz/Publications/Timber-Preservatives-BPG.pdf>)

Osmose New Zealand also provide on-site training for treatment plant operators and regular technical support visits. Osmose New Zealand also have a 24 hour emergency response telephone number.

4.6. Provide an overall evaluation of the combined impact of all of the risks, costs and benefits set out in sections 4.2, 4.3 and 4.4.

Doing this overall evaluation is the main task of the Authority. However, you may wish to express a view on the relative importance of the different risks, costs and benefits and how they should be brought together in making a decision.

(Optional)

ORD-X170 is a timber preservative concentrate in the form of an aqueous dispersion containing copper carbonate and tebuconazole. This concentrate that would be further diluted with water to prepare the ready-to-use solution before use in a timber treatment facility. The general public will not come into contact with the substance as ORD-X170 is not available for retail sale.

No additional costs or risks have been identified for the substances. The ORD-X170 is a new substance formulated to remove hazardous solvents and to optimise manufacturing efficiencies. The next table summarises the levels of risk with and without controls.

Table 7: Overall Risk Assessment for the ORD-X170

Risk	Probability of adverse effect (p)	Seriousness of effect (s)	Risk score (p x s)	Level of risk with no controls	Level of risk with controls
Irritation (eyes); 6.4A					
- workers	3	3	9	Medium	Low
- public	1	3	3	Low	Low
Oral exposure (6.1E)					
- workers	1	3	3	Low	Low
- public	1	3	3	Low	Low
Repeated/prolonged exposure (6.9B)					
- workers	3	3	9	Medium	Low
- public	1	3	3	Low	Low

Form HS1 Import or Manufacture any Hazardous Substance for Release

Waterways or soil contamination (9.1A)	3	5	15	High	Low
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KEY to table:

Probability is scored for 1 = very low to 5 = very high.

Seriousness of the risk is from 1 = little effect to 5 = large effect.

The risk scores are as :

1 – 2	Negligible
3 – 5	Low
6 – 12	Medium
13 – 18	High
19 – 25	Critical

5. International Considerations

5.1. The EPA is interested in whether this substance (or any of its components) has been considered by any other regulatory authority in New Zealand or by any other country. If you are aware of this, please provide details of the results of such consideration.

(Optional)

ORD-X170 is approved for use as a timber preservative by the US EPA.

6. Miscellaneous

6.1. Provide a glossary of scientific and technical terms used in the application.

6.2. Provide here any other information you consider relevant to this application not already included.

7. Summary of Public Information

7.1. Name of the substance(s) for the public register:

Please use a maximum of 80 characters.

ORD-X170

7.2. Purpose of the application for the public register:

To import a timber treatment chemical containing copper carbonate and tebuconazole which is intended for use in industrial timber treatment plants to prevent fungal decay and insect or termite attack in treated timber.

7.3. Use Categories of the substance(s):

(Optional)

Main category: 3

Industry category: 0

Function/Use category: 39

7.4. Executive Summary:

The ORD-X170 is a wood preservative concentrate in the form of an aqueous dispersion for dilution with water before application to timber and wood products in industrial timber treatment facilities. The preservative is intended to treat timber and wood products to prevent fungal decay and insect or termite attack. There is therefore limited risk for exposure to the public as the intended use is limited to an industrial closed system or process. ORD-X170 is a concentrate containing copper carbonate and tebuconazole. This diluted ready-to-use solution will cover a range of treating solution strengths to cover the different treatment processes and timber end-use hazard classes.

The ORD-X170 has the hazardous classifications for acute toxicity (6.1E), eye irritation (6.4A), may cause target organ systemic effects (6.9B) and is highly ecotoxic in the aquatic environment (9.1A). The 9.1A classification triggers the Approved Handler Controls and a waiver for this is requested given the use is at specific types of industrial facilities.

The highest potential risk is if there was a spillage resulting in contamination of soil or waterways. Spillage risks can be minimised by using approved packaging and approved transport operators with appropriate labelling, safety information and placards. At the industrial timber treatment plant the potential for operator exposure and adverse

environmental events can be minimised by following the Best Practice Guideline for Timber Treatment Chemicals and using good occupational practices, e.g. wearing of protective clothing and use of hand and face protection.

Empty containers (drums, IBC's) will be rinsed with clean water, with washings disposed of back into the treatment system. Containers are recycled but when no longer serviceable will be rinsed, crushed and disposed of locally.

The treated timber at the end of its service life, off cuts or treatment residues would be disposed of to an approved landfill licensed to accept preservative treated wood waste. The treated timber contains copper which will not biodegrade. Other components are biodegradable.

No additional direct or indirect costs have been identified. Existing equipment and facilities can be used for the manufacture and use of these substances. This treatment would be used as an alternative to other formulations that have more hazardous classifications. Having the most cost effective preservative formulations and with the lower hazardous classifications assists the treatment industry remain competitive in domestic and export markets.