

SAFETY DATA SHEET

Section 1 Identification of the material and the supplier

Product: **Protim Optimum RFU**
Product Code:
Product Use: **Timber Preservative**
New Zealand Supplier: **Osmose New Zealand**

Address: **14 Mayo Road,
Wiri,
Auckland, New Zealand**

Telephone: (09) 277 7770
Fax Number: (09) 277 8011

Emergency Telephone: **0800 200 162**

Date of MSDS Preparation: **19 November 2009 – version 3** (replaces version 2, 21 October 2009)

Section 2 Hazards Identification

This substance is classified as a dangerous good according to NZS 5433:1999 and HSNO Act 1996.

ERMA approval No. HSR002441

Pictograms



| HSNO Classification | Hazard Code | Hazard Statement |
|--------------------------|-------------|--|
| 3.1C | H226 | Flammable liquid and vapour. |
| 6.1E (oral) | H303 | May be harmful if swallowed. |
| 6.3B | H316 | Causes mild skin irritation. |
| 6.4A | H319 | Causes serious eye irritation. |
| 6.5A | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| 6.5B | H317 | May cause an allergic skin irritation. |
| 6.9B (Single exposure) | H371 | May cause damage to lungs, skin and central nervous system. |
| 6.9B (Repeated exposure) | H373 | May cause damage to lungs, skin central nervous system through prolonged or repeated exposure. |
| 9.1A | H410 | Very toxic to aquatic life with long lasting effects. |
| 9.4B | H442 | Toxic to terrestrial invertebrates. |

| Prevention Code | Prevention Statement |
|------------------------|---|
| P104 | Read safety data sheet before use. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical, ventilation and lighting. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P260 | Do not breathe mist, vapours or spray. |
| P261 | In contact with water releases flammable gas. |
| P264 | Wash hands and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P272 | Contaminated work clothing should not be allowed out of the workplace |
| P273 | Avoid release to the environment. |
| P280 | Wear safety glasses or goggles, PVC or rubber gloves, impervious apron, coveralls and suitable footwear when manufacturing or handling product. |
| P285 | In case of inadequate ventilation wear respiratory protection. An approved organic vapour respirator meeting the requirements of AS1715 and AS1716 should be worn. |
| P312 | Call a POISON CENTER (0800 764 766) or doctor/physician if you feel unwell. |
| P314 | Get medical advice/attention if you feel unwell. |
| P331 | Do NOT induce vomiting. |
| P338 | Remove contact lenses, if present and easy to do. Continue rinsing. |
| P363 | Wash contaminated clothing before reuse |
| P391 | Collect spillage. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water |
| P303 + P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304 + P341 | IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P309 + P311 | IF exposed or if you feel unwell: Call a POISON CENTER (0800 764 766) or doctor/physician. |
| P332 + P313 | If skin irritation occurs: Get medical advice/ attention. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTER (0800 764 766) or doctor/physician. |
| P370 + P378 | In case of fire: Use foam, or water fog. A water spray may be used to disperse vapours that have not ignited. Dry chemical powder and carbon dioxide may be used for small fires. |
| Storage Code | Storage Statement |
| P405 | Store locked up. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |

Disposal Code Disposal Statement

P501 Dispose of in accordance with the Hazardous Substances (Disposal) Regulations 2001. Dispose of residues and/or containers in an approved local authority landfill. Do not bury residues or containers and do not dispose of to waterways. See Section 13.

Section 3 Composition / Information on Ingredients

| Hazardous Ingredients | Wt% | CAS Number |
|----------------------------------|--------|-------------|
| Propiconazole | <1.0% | 60207-90-1 |
| Tebuconazole | <1.0% | 107534-96-3 |
| Permethrin | <0.5% | 52645-53-1 |
| Paraffin Wax | < 0.7% | 8002-74-2 |
| Petroleum Resin | < 5.0% | 64742-16-1 |
| White spirits (Stoddard Solvent) | >80% | 8052-41-3 |
| n-butyl alcohol | <5% | 71-36-3 |

Section 4 First Aid Measures

Routes of Exposure:

IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing while holding the eyelids open. Seek medical attention immediately. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Remove contaminated clothing and wash skin thoroughly with soap and water. Seek medical attention if irritation persists.

IF SWALLOWED: Never give anything by mouth to an unconscious person. Do induce vomiting. Rinse mouth. Give plenty of water to be sipped slowly. Contact the **National Poisons Centre (0800 764 766)** for advice and seek immediate medical attention. **HAVE THIS SDS AVAILABLE.**

INHALATION: Remove to fresh air. Loosen tight clothing and remove any contaminated clothing. Keep victim warm and at rest until recovered. If breathing has stopped, use artificial respiration. Obtain immediate medical attention.

Section 5 Fire Fighting Measures

| | |
|--|--|
| Hazard Type | This product is a flammable, toxic liquid |
| Hazards from decomposition products | Flammable liquid that may form explosive mixtures with air. Thermal decomposition may produce toxic fumes. |
| Suitable Extinguishing media | Extinguish fires with foam, or water fog. A water spray may be used to disperse vapours that have not ignited. Dry chemical powder and carbon dioxide may be used for small fires. |
| Precautions for fire-fighters and special protective clothing | Flammable liquid that may form explosive mixtures with air. Thermal decomposition may produce toxic fumes. Remain upwind and notify those downwind of hazard. Consider evacuation. Wear full protective equipment (see also accidental release measure section 6 of this SDS) including Self Contained Breathing Apparatus (SCBA) when combating fire. In event of fire, closed containers and storage tanks should be kept cool by spraying with water or water fog. |
| HAZCHEM CODE | 3Y |

Section 6 Accidental Release Measures

Eliminate any sources of ignition. Eliminate or isolate the source of leak or spill. Ensure that non-protected personnel are removed from the area. Wear appropriate protective clothing to prevent eye, skin or inhalation exposures as detailed in sections 5 and 8 of this SDS (splash-proof goggles, PVC/rubber gloves, chemically resistant coveralls and boots. Where an inhalation risk exists, wear a Type A (Organic vapour) respirator).

Land Spill or Leaks

Contain spillage. Absorb liquid onto inert material, e.g. sand and dispose of all waste and contaminated material in accordance with the requirements of the Local Authority responsible for industrial waste. Notify Police and local Health Protection Officer if there is any risk of contamination of watercourses. Do not allow unused material or contaminated waste to pollute the environment, especially water courses.

Water Spill or Leaks

Serious loss of aquatic life may result. Ensure that non-protected personnel are removed from the area. Eliminate or isolate the source of leak or spill. Endeavour to contain the contaminated water by pumping out to waste tanks. If not feasible, block off all but the main drainage routes for the contaminated plume. Immediately advise the nearest Regional Council Pollution Control office.

Section 7 Handling and Storage

Approved Handlers

Approved Handlers and Tracking is **not** required for this product as per ERMA Approval No HSR002441

Precautions for safe handling:

Before use carefully read the product label. This product must be handled in a well ventilated area well away from food or feedstuffs. Use appropriate personal protective equipment (see section 8 of this SDS). Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Do not eat, drink or smoke when using this product. Observe good personal hygiene, including washing hands and face before eating. Prohibit eating, drinking and smoking in contaminated areas.

Conditions for safe Storage:

- This product is a UN No.1306 WOOD PRESERVATIVES, LIQUID, PG III, HAZCHEM 3Y, DG Class 3 and must be stored and transported accordingly.
- Pumps and other equipment should be earthed to avoid build up of static charges.
- Store below 30°C.
- Store locked up in secure labelled closed mild steel tanks or drums.
- Store in a dry, clean and well ventilated area.
- Keep out of direct sunlight.
- Store in a bunded area.
- Store in secure area out of reach of children and unauthorised persons.
- Store away from foodstuffs and animal feeds.
- Protect containers from physical damage, e.g. Vehicle impact.
- Keep containers securely sealed.
- Check regularly for spills and leaks.
- Keep away from direct heat/ignition sources.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

| Substance | CAS # (a) | TWA | | STEL | |
|----------------------------------|-----------|---------------------------------------|-----------------------|--------|-----------------------|
| | | ppm(b) | mg/m ³ (c) | ppm(b) | mg/m ³ (c) |
| White spirits (Stoddard solvent) | 8052-41-3 | 100 | 525 | - | - |
| n- Butyl Alcohol (skin) | 71-36-3 | Ceiling 50ppm (150mg/m ³) | | | |

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.*

Engineering Controls:

Use with adequate ventilation. Local exhaust ventilation should be provided if material is handled in confined areas. Volatile solvent vapours are heavier than air; prevent build up in confined spaces or sumps.

Personal Protective Equipment:

Wear safety glasses or goggles, PVC or rubber gloves, impervious apron, coveralls and suitable footwear when manufacturing or handling this product. An approved organic vapour respirator meeting the requirements of AS1715 and AS1716 should be worn if there is a risk of inhalation above the TWA limits (Type A Organic vapour Respirator). When in a poorly ventilated area or confined space then use a respirator supplied with fresh air or a self-contained breathing apparatus.

General:

Always wash hands before eating, drinking, smoking or using the toilet. At the end of the job, wash gloves and remove, then remove goggles and wash, then remove other protective clothing, finally remove respirator. If using a cartridge type respirator, cartridges should be removed and discarded. If the respirator is disposable, it should be discarded after use. If the respirator is reusable, it should be thoroughly cleaned as per the manufacturer's instruction. Clothing must be changed once contaminated. Protective clothing must be washed after each days work. Contaminated clothing should not be washed with normal household laundry.

Section 9 Physical and Chemical Properties

| | |
|---|-------------------------|
| Physical State: | Liquid |
| Colour: | Straw-coloured |
| Odour: | hydrocarbon odour. |
| pH: | Not applicable |
| Solubility: | Immiscible in water |
| Relative Vapour Density (air=1): | Not Available |
| Boiling point: | Typically 150°C - 200°C |
| Freezing Point: | Not Available |
| Melting Point: | Not applicable |
| Ignition Point: | > 200°C |
| Flash Point: | 38°C |
| Specific Gravity: | 0.8 g/mL at 20°C |
| Vapour Pressure: | Not Available |
| % Volatiles: | Not Available |
| Evaporation Rate: | Not Available |

Section 10 Stability and Reactivity

| | |
|----------------------------------|--|
| Chemical Stability | Stable under recommended storage conditions. |
| Conditions to Avoid | Largely non-reactive but avoid strong oxidising agents. |
| Incompatibility | Incompatible with oxidising agents (e.g.. hypochlorites, peroxides), acids (e.g. sulphuric acid), strong alkalis (e.g. hydroxides), heat and ignition sources. |
| Hazardous Decomposition Products | May evolve toxic gases (hydrocarbons, carbon oxides) when heated decomposition. |

Section 11 Toxicological Information

Toxicity Data

Calculated LD50 for the mixture: 1973 mg/kg body weight (rat)

Individual Component Toxicity Data:

| | |
|----------------------------|---|
| WHITE SPIRIT (8052-41-3) | LD50 (Ingestion): > 5000 mg/kg (rat) |
| n-Butyl Alcohol | LD50 (oral) 790 mg/kg Rat |
| PERMETHRIN (52645-53-1) | LC50 (Inhalation): 485 mg/m ³ (rat) LD50 (Ingestion): 383 mg/kg (rat) LD50 (Skin): 1750 mg/kg (rat) |
| PROPICONAZOLE (60207-90-1) | LD50 (Ingestion): 1517 mg/kg (rat) LD50 (Skin): > 4000 mg/kg (rat) |
| TEBUCONAZOLE (107534-96-3) | LC50 (Inhalation): > 800 mg/m ³ /4hrs (rat) LD50 (Ingestion): 2000 mg/kg (mouse) LD50 (Skin): > 5000 mg/kg (rat) |

Health Effects from Exposure:

Low to moderate toxicity - irritant. Use safe work practices to avoid eye or skin contact and vapour generation or inhalation. Over exposure may result in adverse effects to the central nervous system.

| | |
|--------------------|---|
| Eye: | Irritant. Exposure may result in lacrimation, irritation, pain and redness. |
| Inhalation: | Irritant. Inhalation may cause irritation to the respiratory system, nose and throat irritation, coughing, and headache. Over exposure may result in nausea, dizziness and drowsiness. |
| Skin: | Irritant. Prolonged and repeated contact may result in drying and defatting of the skin, rash, dermatitis and central nervous system disorders. |
| Ingestion: | Low to moderate toxicity. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, dizziness and drowsiness with large doses. Aspiration may result in chemical pneumonitis and pulmonary oedema. |

Section 12 Ecotoxicological Information

Environmental Summary

Not readily biodegradable. Extremely dangerous to fish and other aquatic life forms. Harmful to animal and plant life.

Environmental Fate:

The available data for this product indicates that some components of the product are expected to bioaccumulate or persist in the environment. Appropriate precautions should therefore be taken to prevent this product from entering the environment.

Aquatic Ecotoxicity Data

| Component | 9.1 Aquatic ecotoxicity | | | | |
|----------------------------------|-----------------------------------|--|--|-----|-----|
| | Fish 96 hrLC ₅₀ (mg/l) | Crustacea 48hr EC ₅₀ (mg/L) | Algae/plant 96hr EC ₅₀ (mg/L) | B | P |
| Tebuconazole | 4.4 | 4 | 0.151 | No | Yes |
| Propiconazole | 0.83 | 0.5 | 0.00022 | No | Yes |
| Permethrin | 0.0001 | 0.00055 | ND | Yes | No |
| White Spirits (Stoddard Solvent) | ND | ND | 4.3 | Yes | ND |
| n-Butyl Alcohol (n-Butanol) | No 1730 | No 1880 | No >500 | No | No |

Notes to Table

ND = no data available to assess against threshold

No = data available to indicate that the component does not trigger the threshold

P – persistent – not rapidly degradable in water according to criteria specified in Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001

B = bioaccumulative according to criteria specified in Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001

The following water EELs are set:

- propiconazole 0.0001 mg/L
- tebuconazole 0.00024 mg/L
- permethrin 0.0001 mg/L

Soil Ecotoxicity

| Component | Soil Ecotoxicity | | |
|-------------------------------------|--|--|--|
| | 9.2 Soil Ecotoxicity | 9.3 Toxicity to terrestrial vertebrates LD50 (mg/kg) | 9.4 Toxicity to terrestrial invertebrates LD50 (µg/invert) |
| Tebuconazole | No 1381 (earthworm, LC ₅₀) | 1615 | ND |
| Propiconazole | No (based on microbial data) | 1344 | No >25 |
| Permethrin | ND | 220 | 220 9.4A (<i>Apis mellifera</i> – Honey bee) 0.024 |
| White Spirits (Stoddard Solvent) | ND | No 5000 | ND |
| n-Butyl Alcohol (n-Butanol) | ND | 790 | ND |

Notes to Table

ND = no data available to assess against threshold

No = data available to indicate that the component does not trigger the threshold

Section 13 Disposal Considerations

General:

Wear protective clothing as detailed in section 8 of this SDS. Transfer the liquid and solid material to separate containers.

Dispose of by controlled incineration, by licensed personnel. Contact the manufacturer for additional information. Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result. Dispose of in accordance with relevant local legislation. Dispose of residues and/or containers in an approved local authority landfill. Do not bury residues or containers and do not dispose of to waterways.

Legislation:

Dispose of in accordance with the **Hazardous Substances (Disposal) Regulations 2001**.

Section 14 Transport Information

Classified as a hazardous substance by the HSNO regulations.

Road and Rail Transport

| | |
|----------------------|---|
| UN No | 1306 |
| Class-primary | DG Class 3 |
| Packing Group | III |
| Proper Shipping Name | Wood Preservatives, Flammable, Flash point greater than 23°C. |
| HAZCHEM Code | 3Y |

Marine Transport

IMDG

| | |
|----------------------|--|
| UN No | 1306 |
| Class-primary | DG Class 3 |
| Packing Group | III |
| Proper Shipping Name | Wood Preservatives, Liquid, Flammable. |

Air Transport

IATA

| | |
|----------------------|---------------------------------------|
| UN No | 1306 |
| Class-primary | DG Class 3 |
| Packing Group | III |
| Proper Shipping Name | Wood Preservatives, Liquid, Flammable |

Section 15 Regulatory Information

ERMA approval No: HSR002441

HSNO CONTROLS:

Trigger quantities for this substance

Approved Handler : **Not Required** under the ERMA Approval HSR002442

Location Certificate: 500 L in containers greater than 5 L, 1500 L in containers up to and including 5 L (for closed containers), or 250 L (open containers) and held for a period exceeding 18 hours

Hazardous Atmosphere Zone: 100 L (closed), 25 L (decanting), 5 L (open occasionally), 1 L (open continuously).

Tracking : **Not Required** under the ERMA Approval HSR002442

Signage : 100L

Emergency Responses Plan: 100L

Under the NZ Land Transport Rule Dangerous Goods 2005 this product must not be loaded into any container alongside food items.

In Schedule 1 of the Rule a maximum of 50 litres may be transported on land as a tool-of-trade, agricultural use or for commercial purposes without a DG endorsement on the driver's license or vehicle placarding (Class 3, PGIII)

| Section 16 | Other Information |
|------------|-------------------|
|------------|-------------------|

1. Best Practice guideline for the safe use of Timber Preservatives and Anti-sapstain Chemicals, NZTPC Guideline V1.
2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (<http://toxnet.nlm.nih.gov>).
3. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.
4. AS/NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices.
5. AS/NZS 1716 Respiratory Protective Devices.

Disclaimer

This document has been compiled by TSG on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TSG by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TSG has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TSG accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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Please contact the New Zealand proprietor, Osmose New Zealand, phone 64 9 277 7770, www.osmose.co.nz if further information is required.

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