

OSMOSE PROTIM - LOSP H3 (235WR) WOOD PRESERVATIVE

ChemWatch Material Safety Data Sheet
Issue Date: Thu 11-Mar-2004

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

OSMOSE PROTIM - LOSP H3 (235WR) WOOD PRESERVATIVE

SYNONYMS

MW43181520ENVIRONMEN

PROPER SHIPPING NAME

ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE

PRODUCT USE

For use only as a wood preservative. Not suitable for any other purpose. Dangerous POISON. Available ONLY for industrial and manufacturing purposes. To be used by or in accordance with directions of accredited pest control officers. Operators to be trained in procedures for safe use of material. Material is mixed and used in accordance with manufacturers directions Operators should be trained in procedures for safe use of this material.

SUPPLIER

Company: Osmose Australia P/L
Address:
Cafrpirco Road Abn: 75 088 260 575
Mt Gambier
SA, 5290
AUS
Telephone: (+61 8) 8723 1399
Emergency Tel: 1800 039 008 (24 hours)
Emergency Tel: +61 3 9573 3112
Fax: 08 8723 0010

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE

None

RISK

Flammable.
Harmful in contact with skin.

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Section 2 - HAZARDS IDENTIFICATION ...

Toxic by inhalation and if swallowed.
Danger of cumulative effects.
Irritating to skin.
May cause SENSITISATION by skin contact.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
HARMFUL-May cause lung damage if swallowed.
May produce discomfort of the eyes and respiratory tract*.
Limited evidence of a carcinogenic effect*.
Possible respiratory sensitiser*.
Vapours potentially cause drowsiness and dizziness*.
* (limited evidence)

SAFETY

Keep locked up.
Keep away from sources of ignition. No smoking.
Avoid contact with eyes.
Wear suitable protective clothing.
In case of insufficient ventilation wear suitable respiratory equipment.
Use only in well ventilated areas.
Keep container in a well ventilated place.
To clean the floor and all objects contaminated by this material, use water and detergent.
Keep container tightly closed.
This material and its container must be disposed of in a safe way.
Keep away from food, drink and animal feeding stuffs.
Take off immediately all contaminated clothing.
In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
If you feel unwell contact Doctor or Poisons Information Centre. (Show the label if possible).
In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
kerosene	8008-20-6	>90
tributyltin naphthenate	85409-17-2	0-5
dichlofluanide	1085-98-9	0-5
permethrin	52645-53-1	0-2

Section 4 - FIRST AID MEASURES

SWALLOWED

If poisoning occurs, contact a doctor or Poisons Information Centre.

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- For advice, contact a Poisons Information Centre or a doctor.

Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

- Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS.
- Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration.

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Section 4 - FIRST AID MEASURES ...

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
- If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.
- If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

NOTES TO PHYSICIAN

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled

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Section 4 - FIRST AID MEASURES ...

cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

For acute or short term repeated exposures to organic tin compounds:

- Severe exposure results in tinnitus, deafness, memory loss, psychosis, coma, disorientation and respiratory depression after a latent period of 1-3 days.
 - Permanent neurologic sequelae include extrapyramidal hyperkinesia.
 - The material produces erythematous skin lesions.
 - Management is primarily supportive.
 - British Anti-Lewisite and d-penicillamine are not effective as chelators. [Ellenhorn and Barceloux: Medical Toxicology]
-

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

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

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are flammable.
- Moderate fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Moderate explosion hazard when exposed to heat or flame.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

May emit poisonous fumes.

Other combustion products include

highly toxic

metal oxides

i.e.

tin

FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

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Section 5 - FIRE FIGHTING MEASURES ...

HAZCHEM

3W

Personal Protective Equipment

Glasses:
Chemical goggles.

Gloves:
PVC chemical resistant type.

Respirator:
Type A-P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

DO NOT touch the spill material

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb small quantities with vermiculite or other absorbent material.
- Wipe up.
- Collect residues in a flammable waste container.

MAJOR SPILLS

DO NOT touch the spill material

Pollutant

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so. Water spray /fog may be used to disperse vapour.
- Contain or absorb spill with sand, earth or vermiculite.
- Use only spark-free shovels and explosion proof equipment.
- Collect recoverable product into labelled containers for recycling.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

PROTECTIVE ACTIONS FOR SPILL

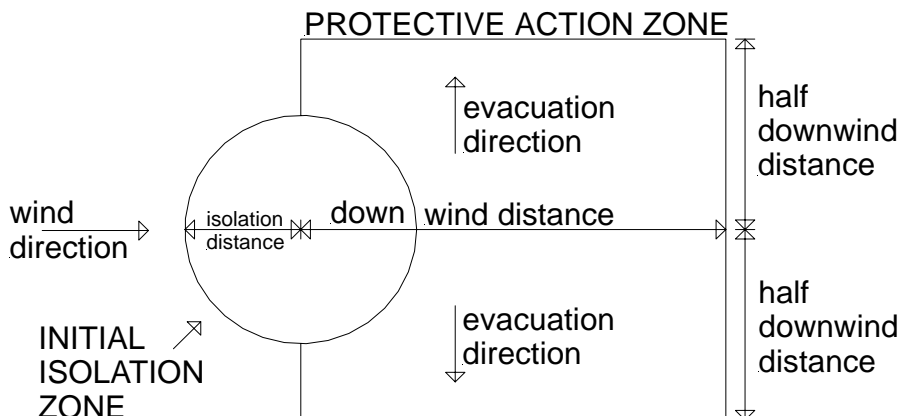
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Section 6 - ACCIDENTAL RELEASE MEASURES ...



From IERG (Canada/Australia)

Isolation Distance	25 metres
Downwind Protection Distance	300 metres
IERG Number	17

FOOTNOTES

- 1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This zone assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees on either side of the predominant wind direction, resulting in a crosswind protective action distance equal to the downwind protective action distance.
- 2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the spill and working away from the site in the downwind direction. Within the protective action zone a level of vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated and unable to take protective action and/or incurring serious or irreversible health effects.
- 3 INITIAL ISOLATION ZONE is determined as an area, including upwind of the incident, within which a high probability of localised wind reversal may expose nearly all persons without appropriate protection to life-threatening concentrations of the material.
- 4 SMALL SPILLS involve a leaking package of 200 litres (55 US gallons) or less, such as a drum (jerrican or box with inner containers). Larger packages leaking less than 200 litres and compressed gas leaking from a small cylinder are also considered "small spills".
LARGE SPILLS involve many small leaking packages or a leaking package of greater than 200 litres, such as a cargo tank, portable tank or a "one-tonne" compressed gas cylinder.
- 5 Guide 131 is taken from the US DOT emergency response guide book.
- 6 IERG information is derived from CANUTEC - Transport Canada.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

other than mild, transient adverse effects without perceiving a clearly defined odour is:

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Section 6 - ACCIDENTAL RELEASE MEASURES ...

American Industrial Hygiene Association (AIHA)

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

DO NOT allow clothing wet with material to stay in contact with skin

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of overexposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid generation of static electricity.
- DO NOT use plastic buckets.
- Earth all lines and equipment.
- Use spark-free tools when handling.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid contamination of water, foodstuffs, feed or seed.

Avoid storage with oxidisers

STORAGE REQUIREMENTS

- Store in original containers in approved flammable liquid storage area.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- No smoking, naked lights, heat or ignition sources.
- Keep containers securely sealed.
- Store away from incompatible materials in a cool, dry, well-ventilated area.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

#3300

EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of vapour components/concentrations:

Composite Exposure Standard for Mixture (TWA) (mg/m³): 900 mg/m³

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m³ Mixture Conc: (%)

Component	Breathing zone (ppm)	Breathing Zone (mg/m ³)	Mixture Conc (%)
kerosene	300.00	900.0000	100.0

INGREDIENT DATA

KEROSENE:

TLV TWA: 200 mg/m³ as total hydrocarbon vapour Skin A3
Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

CAUTION: This substance has been classified by the ACGIH as A3 Animal Carcinogen (at relatively high doses)

OEL TWA: 14 ppm, 100 mg/m³ [NIOSH, 1985]

REL TWA: 150 ppm [Shell]

CEL TWA: 300 ppm, 900 mg/m³

TRIBUTYL TIN NAPHTHENATE:

TLV TWA: 0.1 mg/m³ Organic compounds Skin;A4 [ACGIH]

TLV STEL: 0.2 mg/m³ Organic compounds Skin;A4 [ACGIH]

tin organic compounds, as Sn (A.Wt: 118.69)

ES TWA: 0.1 mg/m³; STEL: 0.2 mg/m³ SKIN

TLV TWA: 0.1 mg/m³; STEL: 0.2 mg/m³ A4

OES TWA: 0.1 mg/m³; STEL: 0.2 mg/m³ SKIN

NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans.

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

IDLH Level: 25 mg/m³ (as Sn)

The no/lowest-observed-adverse-effect levels (NOAELs or LOAELs) in inhalation studies involving tri-n-butyltin chloride and bromide are 0.3-0.4 ppm (2-4 mg/m³) based on changes in the lungs, heart, liver, kidneys, nervous system and reproductive system in rodents. Oral administration of organotin compounds has induced toxicity in a number of differing organ systems, organs and lungs. The LOAEL for triethyltin bromide was 0.4 mg triethyltin/kg/day as 5 ppm in drinking water. The LOAELs for the most critical organ sites in rats (i.e. the cellular immune response and CNS effects) are 0.15 and 0.23 mg/tin/kg body weight/day. Experience with ingested tri- and diethyltins in the treatment of staphylococcal infections, osteomyelitis, anthrax and acne suggests that humans react in a

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

manner similar to rodents, but that the human is more sensitive to absorbed organic tin. The recommended TLV-TWA is thought to minimise the potential for adverse effects on immune function and the central nervous system. A STEL is also recommended to minimise acute symptoms such as eye and respiratory tract irritation, headaches and/or nausea. Based on an exposure to 0.1 mg/m³, a 70-kg worker breathing 10 m³ of air/8hr workday and assuming complete retention of the inhaled dose, would receive a daily exposure of 14.3 ug tin/kg body weight of an organotin compound. A skin notation was recommended based on animal data and the potential danger of enhanced absorption due to damaged skin present in many exposed workers.

DICHLLOFLUANIDE:

Dusts not otherwise classified, as inspirable dust;
ES TWA: 10 mg/m³

PERMETHRIN:

Dusts not otherwise classified, as inspirable dust;
ES TWA: 10 mg/m³

PERSONAL PROTECTION



EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

HANDS/FEET

- Barrier cream with polyethylene gloves
- or
- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber

OTHER

Overalls
and
Rubber apron
or
PVC apron

- Ensure that there is ready access to eye wash unit

Ensure there is ready access to an emergency shower

ENGINEERING CONTROLS

Concentrate material is measured and mixed, preferably outdoors, in proportions as recommended by manufacturer.

Use in a well-ventilated area

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

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

In confined spaces where there is inadequate ventilation, wear full-face air supplied breathing apparatus

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Straw coloured flammable liquid with a slight solvent odour; does not mix with water.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ...

PHYSICAL PROPERTIES

Liquid.
Does not mix with water.
Floats on water.
Toxic or noxious vapours/gas.

Molecular Weight: Not applicable
Melting Range (°C): Not available
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable
Volatile Component (%vol): Not available
Relative Vapour Density (air=1): Not available
Lower Explosive Limit (%): 0.9
Autoignition Temp (°C): 200 approx
State: Liquid

Boiling Range (°C): 152-198
Specific Gravity (water=1): 0.8
pH (as supplied): Not applicable
Vapour Pressure (kPa): 4.76
Evaporation Rate: Not available
Flash Point (°C): >36
Upper Explosive Limit (%): 8.0
Decomposition Temp (°C):

log Kow (Sangster 1997): 6.5
log Kow : 3.48-6.5

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Considered an unlikely route of entry in commercial/industrial environments
The concentrate is
highly discomforting
and
toxic
if swallowed
Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by
aspiration may cause potentially lethal chemical pneumonitis.

EYE

The liquid produces a high level of eye discomfort and is capable of causing
pain and severe conjunctivitis. Corneal injury may develop, with possible
permanent impairment of vision, if not promptly and adequately treated.
The vapour is
mildly
discomforting
to the eyes

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Section 11 - TOXICOLOGICAL INFORMATION ...

SKIN

The concentrate is discomfoting to the skin if exposure is prolonged and the material contains a component that may be absorbed through the skin and may cause in some cases, sensitisation i.e. skin sensitisation
Toxic effects may result from skin absorption
Bare unprotected skin should not be exposed to this material
The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

INHALED

The vapour is discomfoting to the upper respiratory tract if inhaled
Inhalation hazard is increased at higher temperatures.
Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache and even nausea.
The mist is highly discomfoting and harmful if inhaled

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by skin contact with the material skin contact with the material in solution and inhalation of vapour

Osmose Protim - LOSP H3 (235WR) Wood Preservative

None assigned. Refer to individual constituents.
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

KEROSENE:

TOXICITY

Oral (man) LDLo: 500 mg/kg
Oral (man) TDLo: 3570 mg/kg
Oral (rat) LD50: >5000 mg/kg
Inhalation (rat) LC50: >5000 mg/m³/4h

IRRITATION

Skin (rabbit): 500 mg SEVERE

TRIBUTYLTIN NAPHTHENATE:

TOXICITY

tributyltin benzoate:
Oral (rat) LD50: 132 mg/kg
Dermal (rat) LD50: 503 mg/kg

IRRITATION

Nil reported

DICHLLOFLUANIDE:

TOXICITY

Oral (rat) LD50: 500 mg/kg
Inhalation (rat) LD50: 300 mg/m³/4h
Dermal (rat) LD50: 1000 mg/kg
ADI: 0.03 mg/kg/day

IRRITATION

Nil reported

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Section 11 - TOXICOLOGICAL INFORMATION ...

NOEL: 2.7 mg/kg/day

PERMETHRIN: TOXICITY

Skin (rabbit): 500 mg/24h - mild

IRRITATION

Unreported (human) LDLo >4000 mg/kg

Oral (rat) LD50: 383 mg/kg

Inhalation (rat) LC50: 485 mg/m³

Dermal (rat) LD50: 1750 mg/kg

Dermal (mouse) LD50: >10000 mg/kg

Oral (rabbit) LD50: 4000 mg/kg

Dermal (rabbit) LD50: >2000 mg/kg

Oral (g.pig) LD50: 4000 mg/kg

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

cis/trans ratio: 40:60

Oral (rat) LD50: 430-4000 mg/kg *

Oral (mouse) LD50: 540-2960 mg/kg *

cis/trans ratio: 20:80

Oral (rat) LD50: 6000 mg/kg *

cis/trans ratio: 25:75 (in corn oil)

Oral (rat) LD50: 1479 mg/kg [AgrEvo]

ADI: 0.05 mg/kg for nominal cis-trans 40:60 and 25:75 isomers only

[* The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection Council]

Section 12 - ECOLOGICAL INFORMATION

No data for Osmose Protim - LOSP H3 (235WR) Wood Preservative.
Refer to data for ingredients, which follows:

KEROSENE:

DO NOT discharge into sewer or waterways.

TRIBUTYLTIN NAPHTHENATE:

No data for tributyltin naphthenate.

DICHOLOFLUANIDE:

Hazardous Air Pollutant: No

Not toxic to bees

In plants dichlofluanid is metabolised to dimethylsulfanilide which is then demethylated/ hydroxylated.

PERMETHRIN:

Hazardous Air Pollutant: No

Fish LC50 (96hr.) (mg/l): 0.0006-0.0

log Kow (Sangster 1997): 6.5

log Pow (Verschueren 1983): 3.48

log Kow : 3.48-6.5

Half-life (hr) soil : 288-648

BCF : 30-2480*

* Muir et al. 1994 Aquatic Toxicology 29(3/4)223-240

Toxicity Class WHO: II (Ambush); III (Outflank)

continued...

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Section 12 - ECOLOGICAL INFORMATION ...

In soil and water degradation rapid:

DT50 in soil <38 days (pH 4.2-7.7 o.m. 1.3-51.3%)

Synthetic pyrethroids are examples of optimised insecticidal activity, selectivity and tailored environmental persistence. Through modifications of both acid and alcohol portions of the ester, compounds of desired residual activity have been synthesised whilst maintaining a biodegradable ester linkage. These compounds are generally very toxic to crustaceans and fish in laboratory bioassays. Under field conditions, however, the residues are tightly bound in sediment, and ingested residues are readily metabolised. Their toxicity in natural systems are generally less than laboratory test data might indicate. They are generally non-persistent in the environment.

Pyrethrins are generally unstable in the presence of light, are hydrolysed rapidly under alkaline conditions and oxidise rapidly in air. Vapour phase pyrethrins may combine chemically with ozone to produce hydroxy radicals.

Because agricultural dose rates are low and biological degradation is generally rapid, residues are unlikely to attain significant levels. Permethrin disappears from ponds and streams within 6-24 hours, pond sediments within 7 days and foliage and forest soil within 58 days. Pyrethroids are highly toxic to fish; the bioaccumulation factor of cypermethrin in fish is approximately 1000 when measured experimentally, although the potential for significant toxicity is not reached in fields. Under aerobic conditions in soil, permethrin degrades in a relatively short time (half-life 28 days).

Drinking Water Standards:

pesticide 0.1 ug/l (UK max.)

Oral (chicken) LD50: 7000 mg/kg

Oral (quail) LD50: 13500 mg/kg

Oral (duck) LD50: 11300 mg/kg

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible. Special hazards may exist - specialist advice may be required.
- Consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Decontaminate empty containers.
- Observe all label safeguards until containers are cleaned and destroyed.
- Puncture containers to prevent reuse and bury at an authorised land fill.

Section 14 - TRANSPORTATION INFORMATION



Shipping Name:

ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE

Dangerous Goods Class: 6.1

UN/NA Number: 3019

continued...

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Section 14 - TRANSPORTATION INFORMATION ...

ADR Number: 63
Packing Group: III
Labels Required: toxic, flammable liquid
Additional Shipping Information:
International Transport Regulations:
IMO: 6.1, 6.1

HAZCHEM

3W

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

Australian Inventory of Chemical Substances (NICNAS) applies to the following ingredients:

kerosene (CAS: 8008-20-6)

tributyltin naphthenate (CAS: 85409-17-2)

dichlofluanide (CAS: 1085-98-9)

permethrin (CAS: 52645-53-1)

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 57608-04-5). applies to the following ingredients:

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 93388-66-0). applies to the following ingredients:

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 63364-00-1). applies to the following ingredients:

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No data available for permethrin (CAS: 57608-04-5). applies to the following ingredients:

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 60018-94-2). applies to the following ingredients:

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 54774-45-7).

No data available for permethrin (CAS: 75497-64-2). applies to the following ingredients:

No data available for permethrin (CAS: 54774-45-7).

Section 16 - OTHER INFORMATION

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Issue Date: Thu 11-Mar-2004
Print Date: Tue 12-Oct-2004