



**BRANZ
APPRAISAL
CERTIFICATE
No. 423 (2001)**

**OSMOSE®
PROTIM®
LOSP TIMBER
PRESERVATIVES**

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Readers are advised to check that this Certificate has not been amended, withdrawn or superseded by a later issue. Refer to the "Valid Certificates Index" in BUILD magazine published by BRANZ, the Certificate Listing on the BRANZ Internet Site, or contact BRANZ.

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Product

- *This Certificate relates to Osmose® Protim® LOSP (light organic solvent preservative) Timber Preservatives, which are used for treating timber to provide long-term protection from attack by insects and decay.*
- *The products have been appraised for use as preservatives for the treatment of timber of Hazard Classes H1, H2 and H3 as listed in MP 3640 (NZS 3640*) and AS 1604, when used by commercial treatment plants using vacuum/pressure treatment processes.
(*Note: MP 3640 is in the final stages of an update and will soon be released as NZS 3640).*
- *The products must be used in accordance with the instructions of Osmose® printed on their container labels. Osmose® also provides onsite training at individual treatment plants for use of the products.*



Building Regulations

1. New Zealand Building Code (NZBC)

Protim preservatives are themselves not within the scope of the NZBC, however, timber treated with the products and used within buildings is a building element, or part of a building element, and is covered by the NZBC. Therefore, in the opinion of BRANZ, Osmose® Protim® LOSP Timber Preservatives, if used in accordance with the statements and conditions of this Certificate will contribute to meeting the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4 for the relevant physical conditions of B1.3.3. See Section 7.

Clause B2 DURABILITY: Performance B2.3.1(a), not less than 50 years; B2.3.1(b) 15 years; and B2.3.1(c) 5 years. See Section 8.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. See Section 11.

2. NZBC Acceptable Solutions

2.1 Durability requirements contained within the NZBC cover durability of building elements, and means of meeting these durability requirements are contained within NZBC Acceptable Solutions. Acceptable Solution B2/AS1 references NZS 3602: Part 1 as a means of meeting the durability requirements for timber building elements, and NZS 3602 specifies timber treated in accordance with MP 3640 is acceptable to meet durability requirements.

2.2 Timber treated with Protim preservatives will meet the Hazard Class requirements of MP 3640 (NZS 3640), provided it is treated in accordance with the NZTPC (New

Product Information

3. Description

3.1 Protim are LOSP timber preservatives. The active ingredients of the preservatives vary according to the Hazard Class requirements, and are as follows:

- H1 and H2 – Permethrin only.
- H3 - Tributyltin Napthenate (TBTN).

3.2 The products are supplied in a liquid form and have a hydrocarbon odour. They can be supplied in either a concentrated or ready-to-use form.

4. Handling and Storage

The preservatives are supplied by bulk delivery, or in 200 or 1000 litre individual containers. Handling and storage of the products must be as set out in the Osmose® NZ Material Safety Data Sheet (MSDS) for each product. Labels that show similar information to the MSDS for handling and storage are attached to the product containers. These labels also include directions for use of the products.

5. Safety Precautions

When handling or using the preservatives, the procedures set out in the Osmose® NZ MSDS must be followed at all times. The preservatives in their liquid form may, like all other LOSP preservatives, cause irritation of the skin and severe painful irritation and redness of the eyes if contact is made. If fumes are inhaled they may cause headaches, dizziness, nausea and narcosis. Some of the main safety features when using the preservatives are summarised as follows, but the MSDS must always be referenced for full details:

- Personal protection in the form of skin and eye protection must be used when handling the products.
- The products must be used with adequate ventilation, with local exhausting required in confined spaces.
- The products must be stored and transported in accordance with their Dangerous Goods Class, Subsidiary Risk, Packaging Group, Hazchem Code and Poisons Schedule.
- Spills and disposal must be dealt with as specified in the MSDS.

Design Information

6. General

6.1 Osmose® NZ promotes timber that has been treated with the preservatives as Protim Treated. However, the treated timber product itself has not been assessed as part of this Certificate because of the possible multiple number of treatment plants using the product, and the possible multiple sources of supplies of timber to the treatment plants. Protim Treated timber is therefore outside the scope of this Certificate, but relevant aspects of it may be commented on within the Certificate. Information about Protim Treated timber can be obtained from Osmose® NZ. Protim Treated timber can be identified by labelling attached to the ends of individual pieces.

6.2 Protim preservatives provide protection to timber against attack from insects and decay in Hazard Classes H1, H2 and H3 as listed in MP 3640 (NZS 3640) and AS 1604. After treatment,

the minimum retentions on a %mass/mass basis must be as required by MP 3640 or AS 1604 for the timber end use Hazard Class.

Timber must then be labelled according to its Hazard Class.

6.3 Timber treated with Protim preservatives may be used in any situation, subject to its Hazard Class and structural and other requirements for each particular application. NZ 3602 gives guidance to designers for the selection of timber for hazard situations and the Hazard Class required for the timber. It is up to designers and users to select timber of the correct Hazard Class for the hazard situation to which it will be exposed.

6.4 The proper care and handling of treated timber prior to use can have bearing on its efficiency in service. MP 3640 (NZS 3640) gives guidelines in this area, which must be followed at all times. Note should be taken in particular of the requirements in regard to the protection of areas where the timber has subsequently been cut or machined. Where the timber has been cut, notched or bored, supplementary protection using Protim XJ will be required in accordance with the instructions of Osmose NZ. This supplementary treatment cannot be expected to be as effective as the original treatment.

7. Structure

When sawn timbers have been treated with Protim preservatives in accordance with this Certificate, the timber design strength properties given in NZS 3603 will not be reduced.

8. Durability

8.1 Timber that is not naturally durable can be treated with Protim preservatives to prolong its life in order to meet durability requirements of the NZBC, or to meet expected serviceability requirements. The actual durable life of Protim Treated timber will depend on selection and use of the correct Hazard Class of timber, and its use in the correct hazard situation.

8.2 Requirements for protection from corrosion of metal fixings, fasteners and nails used with Protim Treated timber will depend on the durability requirement of the NZBC for the particular building work undertaken, and the exposure zone, location and environment of the fixing, fastener or nail. NZS 3604 is a means of compliance for durability of fixings, fasteners and nails for non-specific designed buildings, and in this instance may also be used for specifically designed buildings. Where a 50-year durability is required (structural applications), fixings and fasteners in accordance with NZS 3604 Table 4.1 will meet NZBC compliance, and materials for nails must be in accordance with Table 4.3.

9. Timber Treatment

9.1 Protim preservatives are used either in their ready-to-use form, or if supplied in concentrated form are further diluted with white spirit in accordance with the instructions of Osmose® NZ.

9.2 Treatment must be carried out to the standards stated in MP 3640 (NZS 3640) or AS 1604, and as recommended by the NZTPC, using vacuum cycles or low pressure/vacuum cycles.

10. Timber Finishing

10.1 Timber treated with Protim preservatives will initially have a natural timber finish, and eventually, like all other exposed timber, will in most cases turn light grey.

10.2 Timber finishing may be carried out using oil or latex-based paints or stains. As for painting or staining any material, the surfaces must be dry and free from any deposits that may

affect the application, adhesion or performance of the paint or stain system.

11. Hazardous Building Materials

Timber treated with Protim preservatives will not be harmful to people. However, care must be taken when handling or using any freshly treated timber to ensure residual treatment compounds do not contact hands or food for example, and become ingested. Freshly treated timber may also give off a slight hydrocarbon odour for a short period of time.

Basis of Appraisal

The following is a summary of the technical investigations undertaken.

12. Investigations

12.1 Note has been taken by BRANZ of the history of use of LOSP treated timber products in New Zealand and overseas for many years.

12.2 BRANZ technical experts have given opinions on the likely effects of the LOSP treatment on metal components use in conjunction with the treated timber.

12.3 Opinions and assessments have been made of LOSP treated timber by the NZTPC before inclusion in MP 3640.

12.4 The manufacturers technical information contained within product labelling has been examined by BRANZ and found to be satisfactory.

13. Quality

13.1 The manufacture of Protim preservatives has been examined by BRANZ, and details of the quality and composition of raw materials used were obtained and found to be satisfactory. Protim preservatives manufacture has been assessed and registered as meeting the requirements of ISO 9002 by Telarc, Registration Number 242.

13.2 Quality of manufacture of the products is the responsibility of Osmose® NZ.

13.3 Quality of treatment of the timber in accordance with the instructions of Osmose® NZ is the responsibility of the timber treaters.

13.4 Specifying the correct Hazard Class of Protim treated timber for the intended end use is the responsibility of the building designer.

14. References

- AS 1604.1 – 2000 Specification for preservative treatment – Part 1: Sawn and round timber.
- MP 3640: 1992 Minimum requirements of the NZ Timber Preservation Council Inc.
- New Zealand Building Code Handbook and Approved Documents, Building Industry Authority, 1992.
- NZS 3602: 1995 Timber and wood-based products for use in building.
- NZS 3603: 1993 Timber structures standard.
- NZS 3604: 1999 Timber framed buildings.
- NZS 3640: 2002 Timber preservation. (Draft)
- The Building Regulations 1992, up to, and including, January 2002 Amendment.

Hazard Chart

Hazard Level	PROTIM [®] LOSP	Application
H1	H1	<ul style="list-style-type: none"> Interior timber framing, flooring, panelling (Anobium and Lyctid risk only)
H2	H2	<ul style="list-style-type: none"> Interior timber framing, flooring, panelling where borers and termites are a risk
H3	H3	<ul style="list-style-type: none"> House framing (at risk from moisture ingress) Laminated beams Fascia Exterior joinery lattice/trellis Pergola trusses Weatherboards
H4 & above	See <i>Lifewood CCA</i> and <i>NatureWood ACQ</i> BRANZ Appraisal Certificate No's 422 (2001) and 410 (2001), respectively.	

Osmose[®] NZ Information about Treated Timber Hazard Classes.

(See NZS 3640 and NZS 3602 for specific details regarding Hazard Classes and uses of timber in building).

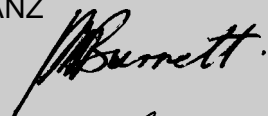
In the opinion of BRANZ, Osmose[®] Protim[®] LOSP (light organic solvent preservative) Timber Preservatives are fit for purpose and will comply with the Building Code to the extent specified in this Certificate provided they are used as set out in this Certificate and any Amendment.

The Appraisal Certificate is issued only to the Certificate Holder, Osmose[®] NZ and is valid until further notice, subject to the Conditions of Certification.

Conditions of Certification

- This Certificate relates only to the product as described herein.
- The Certificate Holder:
 - continues to have the product reviewed by BRANZ;
 - shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - abides by the BRANZ Appraisals Services Terms and Conditions.
- The product and the manufacture are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ.
- This Certificate must be read, considered and used in full together with the technical literature.
- BRANZ makes no representation as to:
 - the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - the presence of absence of any patent or similar rights subsisting in the product or any other product.
- Any reference in this Certificate to any other publication shall be read as a reference to the version of the publication specified in this Certificate.
- This Certificate does not address any Legislation, Regulations, Codes or Standards, not specifically named herein.

For BRANZ



R I Burnett



M E Reed

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