

Introduction

This data sheet covers Light Organic Solvent Preservative (LOSP) treated timber which may be used inside as a termite resistance material or outside above ground, in weather exposed applications, where protection against termites and decay (rot) is needed. For continued satisfactory performance of LOSP treated products, the recommendations below should be followed, along with specific recommendations relating to individual product applications (e.g. for decking refer to Timber Queensland Technical Data Sheet No. 13).

LOSP Treated Timber

LOSP systems get their name from the solvent (white spirits) which may contain various organic fungicides and insecticides. The treatment chemicals are used in an industrial process to increase the durability of a range of softwoods and hardwoods.

When treated for internal or dry applications (H2 level), the timber will be protected against termite and borer attack. This is generally applicable to house frames, trusses and other internal timbers.

When timber is to be used in damp or weather exposed, above ground applications (H3 level), it will resist fungal attack as well as insects, including termites. An appropriate finish system is necessary to inhibit mould growth on the surface and reduce the effects of weathering.

Some LOSP formulations also contain waxes and resins which act as water repellents to reduce moisture uptake during construction, and in so doing, provide greater short term product stability.

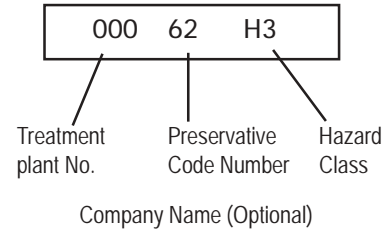
Moisture Content

Before treatment, timber is dried to end use moisture content requirements. The LOSP treatment process does not increase the moisture content of the timber and therefore both moisture content and dimensional stability are maintained during the treatment process. This enables precutting of components and the profiling and sizing of timber products before preservative treatment (e.g. handrails and framing).

Product Identification

In Queensland and New South Wales or where compliance with AS 1604 is specified, treated products must be branded (often on one end). An example is shown in figure 1. The preservative code numbers used for LOSP treated timbers are given in Australian Standard 1604.1; *Timber – Preservative Treated – Sawn and Round*. Some treated timber may contain a colour pigment to help with identification but often there will be no distinctive colour associated with the treatment. The pigments that may be used are not generally intended to be colour fast and will fade with sun exposure. Some LOSP treated timber may be supplied 'pre-primed'

Figure 1.



if exposed to the weather.

Species

LOSP treatment is most often used with most commercial softwoods, which includes the species - Hoop Pine, Radiata Pine, Slash Pine and Carribbean Pine. Some hardwoods may be LOSP treated for borer protection (e.g. Victorian Ash) or for use in external joinery.

Sizes, grades and availability

Common softwood structural sizes are generally available as well as cladding, decking and various mouldings. Material can also be treated to order. Since the treatment process does not increase the moisture content of the timber, stress grades (MGP and F grade) are not changed. Hardwood products such as flooring and external joinery may be available LOSP treated in a limited number of species.

Storage and handling

Timber is often treated in block stacked form and the material inside the pack may contain residual solvent that has not evaporated. Because of this, the distinctive smell of the solvent may be present. As the solvent evaporates the smell will diminish until it is hard to detect. Because of this, treated timber should be stored under cover but in a well ventilated area. If freshly treated timber is stored in an unventilated area strong smells may develop. Before use, packs should be opened up to allow any residual solvent to evaporate.

Using LOSP treated timber

When using LOSP treated timber the following is recommended:-

- If the timber is dry, cotton clothing and gloves should be worn. If the timber has residual solvent on its surfaces, cotton clothing, solvent resistant gloves and a solvent resistant apron should be worn for handling.
- Normal ear, eye and dust protection should be used when sawing, sanding or machining products.
- Avoid contact of bare skin with residual solvent on the timber. If contact occurs, wash the affected areas as soon as possible. Protect cuts and abrasions from contact with treated timber. Sawdust should be brushed off the body and hands should be washed before eating or smoking. If clothing becomes wet from the solvent, it should be washed separately.

In external or damp conditions (H3), all cut ends of LOSP treated timber should be retreated with a brush-on preservative.

When exposed to the weather LOSP treated timber should also have a finish applied and once applied it will need to be maintained at regular intervals. Depending on the degree of exposure, aspect and frequency of wetting, some finishes may require more frequent maintenance.

LOSP treatment is not corrosive. Once residual solvent has evaporated, nailing or plate holding ability is not affected. Fixings should therefore be in accordance with applicable product data sheets for untreated timber.

The presence of residual solvents or use of water repellents in some treatments may affect the glue fixing to LOSP treated timber and the manufacturers advice should be sought.

Finishing

Painted finish:

External and Internal Applications

Some LOSP treated timber may be supplied pre-primed for external applications. Providing the primer is of good quality it may have an undercoat applied over it. If the primed surface is powdery, flaky or sticky, the primer should be removed and the timber reprimed. A cross-hatch test may be used to substantiate adequate adhesion.

Residual solvent may affect the drying and hardening of some paints. It is recommended that unprimed LOSP treated timber be left for a minimum of 7 days before priming with an oil-based primer. If ventilation is limited or conditions are either cold or wet, a longer period is suggested. Timber treated to an H2 level may contain dyes that are mobilised by the paint and become visible after painting. If there are doubts concerning these issues, a small test area should be tried. The paint should dry and harden within the timeframe outlined by the paint manufacturer and dyes should not become visible through the primed surface. If dyes become visible the surface should be sealed with an appropriate sealer prior to further finishing. Refer to paint or treatment chemical manufacturer's recommendations.

NOTE:

- (i) Timber surfaces need to be moisture and solvent dry before painting.
- (ii) The effectiveness of a primer is greatly reduced if exposed to the weather for long periods. For best results primed surfaces should be painted within a week of exposure.
- (iii) The LOSP treatment process does not prevent mould growth on the surface of timber that may become wet after installation. The application of an appropriate paint system, soon after installation will greatly reduce likelihood of mould growth.

Resin bleed may occasionally occur in some softwoods. This can cause discolouration of the paint or it may soften and lift. If resin bleed occurs, the timber should be left to weather until the bleed stops. The exuded resin should then be removed and areas where bleed has occurred should be sealed. Two-pack polyurethane has been shown to be an effective sealer.

When an alkyd (oil based) paint finish is chosen, an oil based undercoat should be applied over an oil based primer, followed by two topcoats of oil based enamel. For an acrylic (water-based) paint finish, a water-based undercoat should be applied over an oil based primer, followed by two acrylic topcoats. In both cases quality paints should be used in accordance with the paint manufacturer's recommendations.

For alternative systems refer to the paint manufacturer.

Stain and clear finishes:

External applications:- Treated timber should be left for a minimum of 7 days before any stain or clear finish is applied. One coat of water repellent should then be applied followed by two or three coats of oil based stain or clear finish. Oil based semi-transparent or solid colour penetrating stains are recommended for external applications. Oils or water repellents, if used, generally require more frequent maintenance, particularly in exposed situations.

NOTE:

- (i) Timber surfaces need to be moisture and solvent dry before coating.
- (ii) The LOSP treatment process does not prevent mould growth on the surface of timber that may become wet after installation. The application of an appropriate finish system soon after installation will greatly reduce likelihood of mould growth.

Internal applications:- A range of stains and clear finishes are available for internal use. Oil based stains and polyurethanes may be applied directly to the product. If an acrylic or water-borne finish is desired, these should be applied over a sealer recommended by the finish manufacturer. If dyes are present in H2 treated material, darker stains are recommended as the dye may affect the colour. It is suggested that a small test area should be tried.

NOTE:

- (i) The stain or clear finish manufacturer's advice should be sought prior to applying the finish to ensure compatibility of products.
- (ii) With T & G products, some finishes may bond board edges together causing irregular gapping due to seasonal movement.
- (iii) Oil and solvent based finishes usually darken with time. This darkening may be significantly reduced if water based finishes are used.

For alternative systems refer to the finish manufacturer.

Safe Working

Working with timber produces dust particles. Protection of the eyes, nose and mouth when sanding, sawing and planing is highly recommended. Refer to tool manufacturers for safe working recommendations for particular items of equipment.

Disposal of Offcuts and Waste

As with all treated timber, do not burn offcuts or sawdust. Preservative treated offcuts and sawdust should be disposed of by approved local authority methods.



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