

Treatment of Outdoor Timbers

Timberlife Technical Note: 003

Finishing, Protection and Maintenance

1. The use of penetrating water repellent wood sealers vs. film forming varnishes

It is important to protect outdoor timbers against water ingress that causes swelling and subsequent shrinkage of the wood, UV degradation, surface mould growth and insect attack, whilst providing an aesthetic finish. All outdoor timbers exposed to sun and rain, for example wooden furniture, windows and doors and in particular wooden decks, are subjected to exceptionally harsh conditions, especially in those areas where high exposure to sunlight is experienced.

In general, film forming varnishes do not perform well on outdoor timbers, especially on wooden decks. Because varnishes do not penetrate and bind properly with the wood structure, they tend to flake and peel after a couple of months of exposure and blackening of the wood as a result of discolouring fungi is often evident in many places where moisture becomes entrapped under the coating. Oil-based water repellent sealers on the other hand penetrate into the wood structure, thereby stabilizing and protecting it from the inside out.

Another problem arising from the use of film forming varnishes on wooden decks is the fact that when wet, the deck surface becomes very slippery which may threaten the safety of people walking on it. This is generally not the case with penetrating wood sealers.

Although a good exterior varnish may require less frequent maintenance when compared with penetrating water repellent sealers, it usually requires extensive surface preparation in the form of stripping and sanding before recoating can take place.

2. Recommendations regarding protective finishes/coatings for outdoor timbers

It is recommended that in the case of outdoor timbers, especially wooden decks that have been coated with a film forming varnish, consideration should be given to replace such coatings with a penetrating oil-based water repellent sealer.

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Advantages of using penetrating water-repellent wood sealers such as **Timberlife's Satinwood 28/28 Base*** (that provides a mat finish) or **UltraCare Gold*** (that provides a semi-gloss finish), are:

- (i) It penetrates and binds with the wood and therefore cannot flake or peel.
- (ii) The penetrating water repellent oil, wax and resin components in these formulations nourish, stabilize and protect wood against the elements.
- (iii) Both the **Satinwood 28/28 Base*** and **UltraCare Gold*** formulations contain a fungicidal additive that provides protection to the wood against mould growth and fungal discolouration as well as an insecticidal additive for protection against potential termite and wood borer attack.
- (iv) The "Colour" formulations also contain high quality, lightfast and UV resistant transparent iron oxide pigments in a range of different wood matching colours. These stains also provide added ultra-violet protection to timbers exposed to sunlight under outdoor conditions. Alternatively, the wood can be pre-stained with **Stain*** that is a pure transparent iron oxide pigment formulation before applying the penetrating wood sealer as a final protective finish.
- (v) Apart from protecting wood, a penetrating wood sealer such as **Satinwood 28/28 Base*** or **UltraCare Gold*** also enhances the natural beauty of the wood.
- (vi) These wood sealers provide a virtually non-slipping surface but effectively repel water ingress into the wood.
- (vii) Most importantly, they are easy to apply and maintain.
- (viii) Penetrating wood sealers such as **Satinwood 28/28 Base*** and **UltraCare Gold*** can be used on all outdoor timbers and is particularly suitable for finishing and protection of horizontally exposed outdoor timbers such as wooden decks and garden furniture.

Note:

- For a more hard wearing semi-gloss finish, **UltraDeck*** instead of **UltraCare Gold*** is recommended for use on outdoor wooden decks.
- Apart from **Satinwood 28/28 Base***, **UltraCare Gold*** and **UltraDeck***, other water repellent wood sealers also offered by **Timberlife** include **Khuni Sealer***, **Satinwood Gloss*** and **UltraSeal*** (Please consult the relevant Product Data Sheets for more information on these products).

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3. Restoration and preparation of outdoor timbers previously coated with a varnish-type finish

3.1 Removal of existing coatings

Remove all traces of any existing varnish-type coating with a good quality chemical paint stripper or by thorough sanding.

The latter method is preferred as proper sanding ensures that the wood surface is restored to its original bare state. It is also recommended that in the case of wooden decks, where possible, decking boards must be removed to allow for all surfaces to be sanded adequately.

3.2 Removal of fungal stains

Remove any fungal stains and discoloration from the wood with **Timberlife's Timbrite RFU***. Allow all surfaces to dry out adequately and sand lightly to remove any loose fibers and to ensure a smooth surface.

4. Treatment and maintenance of outdoor timbers with penetrating water repellent wood sealers

The following penetrating water repellent wood sealers are available from **Timberlife**:

- **Satinwood 28 Base*** is recommended for use on Hardwoods of low porosity where a mat finish is preferred.
- **Satinwood 28*** and **Khuni Sealer*** is recommended for use on Softwoods and Hardwoods of high porosity where a mat finish is preferred.
- **UltraCare Gold*** and **UltraSeal*** can be used on Hardwoods and Softwoods where a semi-gloss finish is preferred.
- **Satinwood Gloss*** can be used on Hardwoods and Softwoods where a higher gloss finish is preferred.
- **UltraDeck*** is recommended for use on wooden decks where a more hard wearing semi-gloss finish is required.

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4.1 Recommended pretreatment at construction/installation level or after restoration of previously coated outdoor timbers

4.1.1 Treatment before construction/installation

- Thoroughly coat the entire surface area of the wood with the preferred **Timberlife** wood sealer using a soft brush, roller brush, clean cotton cloth, spray or dip application method.
- Ensure that all exposed surfaces and especially the end grain are thoroughly coated and sealed.

Note: In this case dip application is the most preferred method.

4.1.2 Treatment after construction/installation

- Apply two further coats of the same wood sealer directly after construction/installation and prior to using the structure (See “5. Recommended application procedure” below for treatment details).

4.2 Recommended post treatment and maintenance of outdoor timbers

4.2.1 Treatment of newly constructed/installed and restored timbers

- Apply a further coat of the same **Timberlife** wood sealer within approximately one month, and preferable not longer than three months after construction/installation. (See recommended application procedure below).
- Ensure that all exposed surfaces are thoroughly coated.

4.2.2 Maintenance of outdoor timbers

- Depending on the outdoor exposure conditions, apply a maintenance coat of **Satinwood 28/28 Base***, **Khuni Sealer*** or **UltraDeck*** at least twice a year. In the case of **UltraCare Gold***, **UltraSeal*** and **Satinwood Gloss***, apply a maintenance coat at least once a year (See “5. Recommended application procedure” below).

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- When in doubt, apply a maintenance coat of the relevant **Timberlife** wood sealer when the wood appears faded or dry, especially on horizontal surfaces such as decking boards.

Note:

- Higher build wood sealers such as **UltraCare Gold***, treatment generally requires less frequent maintenance when compared with low build, deep penetrating wood sealers such as **Satinwood 28/28 Base***.
- Where regular cleaning of outdoor timbers such as wooden decks and furniture is required, it is recommended that **Timberlife's Deckwash*** be used. **Deckwash*** is a surface cleaning agent specially developed for maintenance of outdoor timbers that have been treated with an oil-based penetrating sealer (For more information please consult the Product Data Sheet for **Deckwash***).

5. Recommended application procedure

- Remove all dust and foreign materials and, if necessary, sand lightly or simply wipe down all surfaces with a clean cotton cloth lightly moistened with mineral turpentine. (Ensure that all surfaces are completely dry and clean before proceeding with the next step).
- Use a soft brush, roller brush or clean cotton cloth dipped in the **Timberlife** wood sealer of your choice and apply to all exposed surfaces in light, short strokes, ensuring thorough and even distribution of the sealer. Spray application can also be used.
- Leave the sealer on for at least 1 to 2 hours to allow absorption into the wood.
- Use a clean cotton cloth and wipe off all excess liquid to leave a natural smooth finish.
- Allow to dry for approximately 24 hours before application of another coat.

Please note:

- Most of the **Timberlife's** wood sealers are ready-for-use formulations except if otherwise indicated. Do not dilute.
- Dilute only as prescribed when required.
- Mix well before use.
- Never apply any wood sealer during the heat of day. Rather apply during early morning or late afternoons, except if shaded from direct sunlight.

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- Never apply wood sealers on wet surfaces or if rain is forecasted. Should rain or water fall on the treated surface within 24 hours after application, mop up or wipe off all forms of free water.
- If applied by brush, roller brush or spray methods, clean equipment with mineral turpentine.
- Regular application of **Timberlife**'s wood sealers will ensure that your outdoor timbers remains aesthetically pleasing as well as fully protected against our harsh South African climatic conditions.

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