

## Treatment of knots and end grain

Factory finished joinery

### Knots

Vacuum preservative treatment is widely used in the manufacture of external softwood joinery products. Due to natural variation in the density and structure of timber, the absorption of preservative also varies and the drying time of the treated timber must be sufficiently long to ensure solvent has fully evaporated.

The area in and around knots needs particular attention, due to the high density of the knots and levels of resin they contain. Preservative treatment partially dissolves and mobilises resins which are drawn out towards the timber surface as the solvent evaporates. In most cases this occurs before the joinery is factory coated. However, around resinous knots/timber, if insufficient drying time is allowed, resin migration will continue after the joinery has been factory finished and cause staining of opaque finishes.

Ideally, preservative drying times should be extended when resinous and knotty timber is treated, but often this is impractical particularly when production schedules are tight or drying conditions less than ideal. Switching to water based preservatives, either vacuum or surface applied, will reduce the problem, though not eliminate it completely.

Application of a proprietary knotting product (e.g. Teknos Knotting) in accordance with the manufacturer's recommendations helps to reduce staining caused by resin in knots. Application should encompass the whole of the knot and any adjacent resinous area and should be applied to a smooth level finish.

Movement within knots which has resulted in cracks must be treated by filling the cracks, prior to the application of the knotting, with a fine surface filler such as Teknofill 5001. This provides an additional barrier and a continuous surface for the knotting to seal.

Finally, a knot inhibiting primer, Anti Stain Aqua 2901, should be applied prior to any opaque topcoats.

The above guidelines will significantly reduce, though not completely prevent, knot staining and minimise site remedial work: though the only way to completely eliminate knot staining is to switch to knot free or laminated timber.



### End Grain

The most vulnerable part of exterior joinery is the end grain, which readily absorbs moisture, discolouring the timber and reducing the adhesion of the coating system. A full glue joint is essential to protect end grain within a joint, and Teknos strongly recommend all exposed end grain is treated with Teknoseal 4000 and all construction joints are filled with Teknoseal 4001. These sealers will substantially reduce the uptake of moisture through end grain, especially important when coating mitre joints, and significantly extend the life of the coating system.

**Opaque Systems:** Brush apply two full coats of Teknoseal 4000 end grain sealer and allow to dry fully prior to spraying the paint system. .

**Translucent Systems:** *After basestain application, brush apply two full coat of Teknoseal 4000 end grain sealer and allow to dry fully prior to top coat spraying.*

Prior to final top coat application, apply a thin bead of Teknoseal 4001 on all construction joints and treat end grain on the tops and bottoms of doors, frames and projecting cills.

### Teknos UK and Ireland

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