

## Remmers Information Sheet

### Coatings for oak joinery

Oak windows and doors require special attention due to the difficulties of working with oak. Oak has a very open grain structure and is rich in water-soluble tannins. The oak employed in joinery manufacture is usually quite dry, often leaving the joinery factory at less than 10% moisture content. In the UK wet weather conditions the moisture content of the oak will rise to as high as 18-20% even if the surface is coated in a modern high performance wood coating. The natural tendency of the timber to crack and split is often the result of this doubling of the moisture content. Unless low build non film-forming coatings are used, the finish will start to peel away where the cracks and splits appear.

Oak has a tendency to rapidly discolour to a grey appearance when exposed to UV light. The high concentration of tannins (or extractives) present can lead to unsightly dark discolouration. These extractives also react with any traces of iron resulting in even darker discolouration and staining.

Due to its natural beauty and distinctive grain structure, the preferred option with oak is to use very light coloured translucent or even clear coatings to preserve this appearance. This results in much shorter periods of longevity from the coating system especially when clear protection is employed. The picture opposite shows a clear oak finish where the natural colour of the oak has faded and dark tannin staining is present at the joint.



### Solutions

- **Aim to reject incoming timber with a low moisture content below 12%. The lower the moisture content, the worse the potential for moisture-related movement.**
- **Use high performance MS polymer gap filling adhesives such Frencken 0819. These are flexible and are highly impervious to moisture ingress.**
- **Use a high performance end grain sealer such as Induline SW-910 on all cut ends before finishing to reduce moisture ingress and prevent tannin staining.**
- **Utilise coatings with sufficient UV protection to prevent degradation of the oak surface. Clear coatings are not suitable for this purpose.**
- **Incorporate design measures to protect oak joinery from excessive moisture uptake.**

For further advice contact the Remmers Woodcoating Technical Team.

*This has been prepared based on Remmers' current knowledge and experience of current best practice in the fields of coating application, timber technology and joinery and building design. Such best practice advice is always subject to change. Remmers cannot be responsible for the application of the coating and the extent to which our customers adhere to this best practice. In case of changes in the parameters of the application, such as changes in substrates, or in case of a different application, consult Remmers' Technical Team prior to using Remmers products. Any quantities shown are for guidance only and the user must allow for variations in temperature, surface profile, absorbency and wastage. The user of the product must test the product's suitability for the intended application and purpose. Except as expressly stated in writing Remmers' warranty is governed exclusively by our current Standard Terms and Conditions of Sale. In particular, Remmers does not warrant the correct application of its products.*