

## Case Study Number Two

### Plywood as a Substrate and the Effects of Tannin

In Case Study One, consideration is given to the way in which the natural residual make up of wood can have a direct bearing on the extent that mould growth may develop after the plywood background is decorated.

However mould growth is not the only issue of concern when considering a suitable plywood base. Of equal importance is the need to protect against the risk of surface staining caused by the transfer of Tannin leaching out of the plywood, through the surface coating, to deposit as a stain on the surface of the finished textured coating.

Tannin (a name perhaps most associated with the process of staining leather) occurs naturally in nearly every plant from around the world and is particularly prevalent in trees and in many respects is another of nature's way of protecting the tree from fungi and bacteria.

Whilst the natural staining effects from the tannin process are of positive benefit in the colouration of leather, such an outcome were it to be allowed as part of the process of preparing the wall of a Park Home, would be devastating.

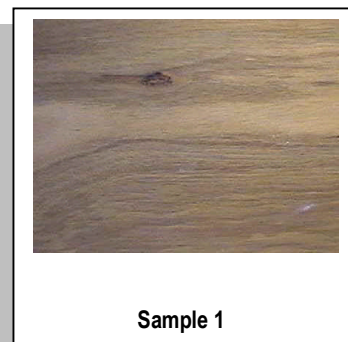
Because it is impossible to see regional variation in the origin of plywood with the naked eye it becomes difficult to determine if the levels of tannin are high or low. Inevitably this makes the Park Home Manufacturers task of plywood selection quite onerous.

Where the tannin content may have been low, staining may not have manifested itself on the surface of the finished textured coating, however a change in supply source might result in plywood containing much higher levels of tannin being used, with potentially catastrophic consequences.

Having recognised the seriousness of this issue, **Everlac** (GB) Ltd worked in consultation with a number of Park Home Manufacturers who themselves had already identified and experienced this matter first hand. Plywood samples, in their untreated state, were collected from a cross section of Park Home Manufacturers as delivered to them from the plywood supplier.

**Everlac's** Research and Development facilities carried out a number of detailed long term weathering trials with a range of finishing coatings some protected with a tannin block whilst others were left unprotected.

The results were clear. The level of tannin staining varied from one supply of plywood to another leading to a high level of uncertainty as to the tannin levels that may be present in any one batch of plywood.



Following the above trials, **Everlac** (GB) Ltd conducted a detailed investigation into the identification of an effective means of blocking the transfer of tannin even in the most extreme of circumstances.



This research programme has resulted in the development of **Everblock Stain Blocking Primer** designed not only to control the migration of tannin but also to form an effective barrier against water-soluble and oil based stains and adhesive residues.

Furthermore **Everblock Stain Blocking Primer** has also been developed to effectively prime a wide range of substrates including wood, particle board, masonry, plasterboard and previously coated substrates.

Tannin bleed through, clearly visible where Everblock Stain Blocking Primer has not been applied to the plywood background

**Everblock Stain Blocking Primer** now forms the important second stage in the **Everlac Everflex** and **Evercoat** System process



← Application of Everblock Stain Blocking Primer by airless spray



↑ Application of Everblock Stain Blocking Primer by roller

For further data on **Everblock Stain Blocking Primer** and its application procedure please refer to the Technical Data Section.