

DID YOU KNOW?



Hints and tips from the Technical Department

Forestwood

There have been a few comments made in the market place concerning 'lumpiness' of Forestwood Traditional Oil Stain.

In all cases these lumps are a soft and disappear as soon as any sort of force is applied to them, be it machine stirring or brushing.

The lumps arise from a thickener that stabilises the formulation, preventing settling and flocculation of the pigment. Over time, while the can is sitting on the shelf, the Forestwood Traditional Oil Stain gradually structures to a soft gel. The relative firmness of this gel depends on the temperature, so if the can is in a sunlit window or stored in a vehicle where temperatures can reach 50°C a firmer gel is formed. The gel breaks down when machine stirred, but if hand stirred a lumpy appearance may result.

Even though these lumps disappear as soon as the stain is subject to the shear forces of application, giving no problems on the job, some customers do appear to find this in-can appearance disconcerting.

The lumps are a part of the nature of the product, they cause no application problems and arise from an ingredient essential to the long term shelf life of Forestwood Traditional Oil Stain.

Some background to Forestwood Traditional Oil Stain may assist in an understanding of this product nature.

On November 1, 1957 the Forest Products Laboratory of the Forest Service Division of the U.S. Department of Agriculture in Madison, Wisconsin, published Report 2096 in which they made available, free of charge, a formulation to produce a natural finish on timber. This is the famous 'Madison Formula', which was first commercialised in New Zealand as Gold X NF11.

The formulation contained boiled Linseed Oil as the binder, either mineral or vegetable turpentine as the reducer and contained paraffin wax for water repellency, natural oxide pigments for UV resistance and pentachlorophenol to prevent mould growth.

Improvements and changes have been made over the years to this formulation due to both availability of raw materials and regulatory changes which have, inter alia, forced us to remove pentachlorophenol as, though an effective fungicide, it is very toxic.

We have introduced automotive grade pigments, which improve durability by having better UV absorbing character and make the stain more natural by having greater transparency.

We have reformulated to make the stain more inherently resistant to mould growth by reducing the level of boiled linseed oil, so removing the need to use toxic fungicides.

With a reduced level of linseed oil extra thickener is needed to ensure a stable, non-flocculating, soft settling product. It is this level of thickener that results in the occasional observation of lumpy product.