

Polygel GA 800 W55

Type

Thixotropic modified alkyd resin

Supply form

55% solid in white spirit

Suggested applications and properties

Polygel GA 800 W55 is a thixotropic resin developed to provide long lasting decorative wood coating when it is blends with the LA 401 W65.

It is particularly suitable for exterior system requiring extensibility and resistance to age embitterment when used in wood coating.

The polygel is based on urethane technology and as a result the resin has non-melting characteristics and is highly to syneresis.

Typical Characteristics

Oil type

Solvent

Non-volatile content

Viscosity at 25°C

Maximum acid value (mgKOH/gm)

Maximum Gardner colour

Specific gravity at 25°C

GA800 W55

Linoleic rich

White spirit

53-57%

3-7 poises

10

9

0.94

Compatibility

Polygel GA800 W55 is compatible with most medium and long oil alkyds. It is also compatible with oleoresinous varnishes, drying oils and polymerized (stand) oils of low and medium viscosity.

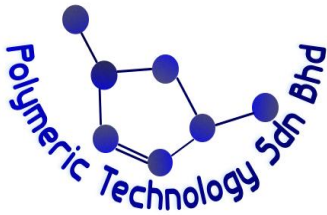
The information given is to the best of our knowledge true and accurate but any recommendations or suggestions made are without guarantee since the conditions of use are outside our control. (Oct 2005)

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Recommendations for use

For air drying finishes, a mixture of Cobalt and Zirconium driers to give 0.05% Cobalt and 0.15% Zirconium expressed as metal on solid alkyd is recommended. To enhance the drying, 0.2% of calcium calculated on resin solid can be added. Unlike the conventional thixotropic alkyds the rheology of the system is unaffected by the polarity of the calcium drier used.

It is normal practice to add anti-skinning agent, and methyl ethyl ketoxime at 0.50% of the total paint is recommended.

Polygel GA800 can also be used in the formulation of primers, undercoats, gloss finishes and clear wood stains. Coatings based on this resin possess extensibility and resistance to age embitterment to enable them to tolerate the natural movement of the wood structure without cracking or losing adhesion. Polygel GA 800 will normally be used in combination with Polykyd LA 401 to produce a range of structures. It should not be used with conventional blending alkyds to avoid affecting the exceptional durability characteristics of the resin.

It is important to note however that full structure is attained only with the addition of polar solvent normally added at the end of the paint manufacturing process. Glycol ether such as propylene glycol mono-methyl ether and dipropylene glycol mono-methyl ether have been found to be most appropriate for this purpose. Glycol mono-acetate is also highly effective. The optimum level of polar solvent to achieve maximum thixotropic effect is at 5% based on total resin solid.

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Method of using Polygel

To obtain maximum structure, pigments/extenders should be carried out in Polykyd LA401 in order to achieve the required fineness. Then, Polygel GA800 should be added to stabilise the pigment dispersion under strong shearing conditions. This is best achieved by maintaining the pigment and resin mix at the highest viscosity yet maintaining mobility. The objective is to incorporate the Polygel GA800 in the shortest possible time and at minimum shear rate. If the viscosity of the mixture is too low, excessive shear rates are required to obtain an homogenous mixture. This will result in diminished gel strength and excessive aeration in paint.

As soon as the polygel GA800 has been completely incorporated, the speed of stirring should be decreased to minimum and remainder of the formulation should be added. The polar solvent will be added at the final thinning stage.

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