

DIY PO80 Tooling Resin (Data Sheet)

Polyester Tooling Resin

DIY PO80 is a Polyester Tooling resin that is used within the DIY Composites Eco Mould range. It provides an efficient way of building high quality FRP tools with good dimensional stability and allows the end user the ability to build re-enforcement layers into their tool extremely fast but with robust results.

The characteristics of DIY PO80 resin are:

- Ease of application, due to low viscosity, by spray-up or hand lay-up
- Excellent curing where only DIY MEKP has to be added
- Good mechanical strength and heat resistance creates a long lifetime tool
- Low shrinkage gives the final tool a superior surface profile and good dimension stability

Typical Resin Properties

Typical liquid resin properties	Property at 23 °C	Value	Unit	Method
	Viscosity, Brookfield RV3, 10 rpm	2300	mPas	ISO 2555
	Viscosity, cone & plate	330	mPas	ISO 2555
	Monomer content	30	%	SFS 4864
	Geltime, 1,5 vol-% MEKP-50	50	min	D 006
	Peak exotherm	90	°C	D 006
	Density	1,37	g/cm ³	ISO 2811-1

Applications

Always mix DIY PO80 tooling resin thoroughly before use to homogenise material completely. Application of the resin is easy due to its low viscosity and high thixotropic index. It is used within the DIY Composites ECO Mould range as the final resin to be added to the tool when laminating the bulk / re-enforcement material.

The curing characteristics of DIY PO80 resin is optimised to build a minimum laminate thickness of 5 mm wet on wet with powder bound mat (4 x 450 g/m²). In this way, high quality tools can be produced faster than with conventional methods. Efficient impregnation of glass fiber and very low linear shrinkage makes DIY PO80 tooling resin particularly suitable for production of tools requiring high dimensional stability and surface profile.

Method of use

Stir the resin thoroughly in its original container. Take the quantity needed of resin into a large enough container to be able to add 1.5% of DIY MEKP Catalyst or high quality equivalent and mix the catalyst thoroughly into the resin making sure that none of the resin is left anywhere in the mixing cup unmixed.

Typical hand laminating is done by brush. The user must ensure good wetting out of the laminate and avoid air voids and air entrapment in the laminate. Once application by brush is complete then allow the laminate to fully cure at ambient.

For best results as part of the DIY Eco Mould range then once the item is fully cured, a post cure at 40 – 50 degrees on the pattern can be completed. Always ensure your pattern material is suitable though before post curing.

Storage

It is highly recommended that all material is stored at stable temperatures under 20°C preferably indoors, and away from direct sunlight. Prolonged storage outside of recommended conditions can influence liquid resin properties like viscosity and gel time. It is also strongly recommended to mix resin thoroughly before use. Shelf life of DIY PO80 tooling resin is six (6) months.

Further Information

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DIY Composites requests that the user reads, understands with the information contained herein and the current Material Safety Data Sheet.

DIY Composites

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