

DIY VE Tooling Gel Coat (Data Sheet)

DIY Composites premium tooling gelcoat is based on vinyl ester resin, which is a guarantee for a hard and glossy tool finish. And is designed to be used in association with the other products sold within the DIY Composites Eco Mould range. This gel coat offers good mechanical and chemical resistance helping to create a robust and durable tool surface.

Typical liquid gelcoat properties at 23 °C	Property	H (Brush)	S (Spray)	Unit	Method
		Value	Value		
	Viscosity, Brookfield	12000 ¹⁾	6000 ²⁾	mPas	ISO 2555
	Viscosity, cone & plate	1000	250	mPas	ISO 2884
	Geltime, 2,0% MEKP-50	17	12	min	ASTM D2471

¹⁾ RV5, 10 rpm ; ²⁾ RV4, 10 rpm

Typical gelcoat base resin properties	Properties (post cure 24 h 50°C)	Value	Unit	Method
		Tensile strength	86	MPa
	Tensile modulus	3170	MPa	ASTM D638
	Elongation at break	6,7	%	ASTM D638
	Heat deflection temperature	105	°C	ASTM D638
	Hardness	35-40	Barcol	ASTM D2583

Applications

DIY VE Tooling Gel Coat is suitable for the manufacturing of tooling for a range of industries and when used in conjunction with the other DIY Composites ECO Mould range will provide a robust tooling solution suitable for use in the production of wet lay GRP and other composite materials such as wet lay and infused carbon fibre.

To achieve best results, temperature of all equipment, materials and work shop must be 20-26°C. If the temperature is too low the tooling gelcoat may be undercured (which can also occur if gelcoat layer is too thin or MEKP peroxide dosing is incorrect) and a hard glossy surface cannot be achieved.

Method of Use

Stir the tooling gelcoat gently in the container it is provided in. Take the needed quantity of gelcoat into a large enough container to be able to add 1.5 - 2% of DIY MEKP Catalyst or high quality equivalent and mix the catalyst thoroughly into the gelcoat ensuring a through mix is important. Make sure that no gel coat is left unmixed at the sides or bottom of the mixing pot.

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Ensure that the pattern / component that the gel coat will be applied to has been treated as per guidelines with DIY Let Go release agent or equivalent.

DIY VE Tooling Gel Coat is designed for application by high quality brush in two layers. A first even layer of gelcoat should be applied looking for even smooth coverage with no air entrapment. The gelcoat should then be left to reach the tack stage which will vary in time depending on room temperature and accurate catalyst mixing volumes. The tack stage at DIY composites is defined as when with a light touch a finger can be drawn across the gel coat surface and when removed no gel coat comes away with the finger, however if you were to push the gel coat with that finger an imprint would be left on the gel surface.

Once the 1st layer has reached the tack stage, the second layer of gel coat should be applied in a smooth and even layer again ensuring there is no air entrapment or voids in coverage. This should then be left to reach the tack stage before the next stage of the tool making process is commenced.

For best results a post cure of the final tool once all stages of the build up and lamination / re-enforcement are complete can be completed at 40-50 °C

Storage

It is highly recommended that all materials are stored at stable temperature under 25 °C indoors, and away from direct sunlight within a metal COSHH cupboard.

Shelf life of DIY VE Tooling Gel Coat is 5 months.

Prolonged storage or storage outside of recommended conditions can influence gelcoat liquid properties like viscosity and gel time and it is recommended to test these properties before starting application.

Further Information

All information presented within this document is believed to be accurate and reliable, but is solely for the user's consideration, investigation and verification. Our technical advice, whether verbal, or in writing is given in good faith, but without warranty express or implied—this also applies where proprietary rights of third parties are involved.

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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

DIY Composites LTD markets and sells composite materials online and from its premises for the end user.

For any enquiries please contact DIY Composites by email at info@diycomposites.co.uk