Technical Datasheet

INEOS Composites

MAXGUARD™ GT // HF/SF Premium Tooling Gelcoats

MAXGUARD GT // HF / SF premium tooling gelcoats are based on epoxy vinyl ester resin, which is a guarantee for a hard and glossy tool finish. Also good mechanical and chemical resistance of the tooling gelcoat will increase endurability of the tool. MAXGUARD GT // HF / SF tooling gelcoats are available in black and green colours, and as neutral base.

Typical liquid gelcoat properties at 23 °C

Property	H (Brush)	S (Spray)		
	Value	Value	Unit	Method
Viscosity, Brookfield	10000 [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	ASTM D638
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

Application and use

MAXGUARD GT // HF / SF premium tooling gelcoats are suitable for manufaturing of tooling used in the marine, transportation and building and construction industries.

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 accure if gelcoat layer is too thin or peroxide dosing is incorrect) and a hard glossy surface cannot be achieved.

Some guidelines;

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- Stir the tooling gelcoat gently in the original pail.
- Take the needed quantity of gelcoat into a large enough pail to be able to add 2% of peroxide and mix peroxide thoroughly into the gelcoat.
- HF (Brush): A brush grade has to be applied (with a high quality brush) in two layers. Apply a brush grade gelcoat very carefully to get even layers without sagging and air bubbles. The gelcoat must be allowed to cure between the layers for 3-6 hours, to form a sticky surface which does not give colour if touched with fingertips.
- SF (Spray): The spray grade has to be applied by spraying several thin layers wet to wet (approx.0,2 mm each) with smallest possible nozzle and with lowest possible pressure.After each layer, keep a break of 2-4 min to allow the air to come out. The final wet layer thickness should be minimum 0,8-1,0 mm.
- The final thickness of the cured tooling gelcoat should be 0,8 mm.
- For best results a post cure of the final tool at 40-50 °C is recommended .

Certificates and approvals

The manufacturing, quality control and distribution of products, by INEOS Composites, are complying with one or more of the following programs or standards: ISO 9001, ISO 14001 and OHSAS 18001.

Handling and storage

For good handling and working practices, see INEOS Composites "Gelcoat Handling Guide". It is highly recommended that all materials are stored at stable temperature under 25 °C preferably indoors, and away from direct sunlight. A high quality methyl ethyl ketone peroxide (MEKP) catalyst should be used between 1.5 - 2.5%. The gelcoat with the catalyst must be gently stirred before taken in use.

The material should be used within 3 months from the date of manufacture. 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

Notice

All information presented herein is believed to be accurate and reliable, and is solely for the user's consideration, investigation and verification. The information is not to be taken as an express or

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Since the user's product formulations, specific use applications and conditions of use are beyond the control of INEOS Composites, INEOS Composites makes no warranty or representation regarding the results which may be obtained by the user. It shall be the sole responsibility of the user to determine the suitability of any of the products mentioned for the user's specific application.

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