

## NORPOL TOOLING GELCOAT GM

### DESCRIPTION

NORPOL GM is a tooling gelcoat based on vinylester resin which provides maximum resistance to chemicals and solvents.

NORPOL GM lends the mould a lasting high gloss finish which will stand up to relatively large number of lifts between each waxing and polishing operation provided the tooling gelcoat is properly cured.

Owing to its high deformation temperature and flexibility NORPOL GM is a robust quality and consequently less susceptible to crack formation and dull patches.

The mould should not be put into service before the tooling gelcoat has achieved a hardness index of at least 35 Barcol (934-1). Minimum temperature during cure and postcure should be 18°C.

Due to the content of Vinylester in NORPOL GM, special components have to be used to obtain thixotropic properties. As a consequence the Certificate of Analysis (COA) will show that the tooling gelcoat is approved at a lower thixotropy (Brookfield) compared to what the product data sheet is showing, due to the fact that NORPOL GM will use 3-5 days before the thixotropy is stabilized. Furthermore NORPOL GM will appear extremely thick, almost as a gel consistency, when the pail is opened. During stirring the thixotropy will be broken down to values corresponding to the product datasheet.

Apply a test sample of the tooling gelcoat before the main operation so as to make sure of a good result.

Available colours : NORPOL 100 (clear), NORPOL 6014 (green), NORPOL 9000 (black)  
Recommended peroxide level : 1.3 - 1.8%  
Recommended film thickness : 0.55 - 0.85 mm (wet film)

The information herein is general information designed to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to contents and suitability for their specific applications. We warrant that our products will meet our written specifications. **Nothing herein shall constitute any other warranty express or implied, including any warranty of merchantability or fitness for a particular purpose**, nor is any protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is limited to replacement of our materials and in no event shall we be liable for special, incidental or consequential damages.



**PROPERTIES**

**PHYSICAL DATA IN LIQUID STATE AT 23°C**

Properties	Spray quality	Hand quality	Unit	Test method
Viscosity				
- Brookfield RVF sp.4/4 rpm	9000-15000	14000-20000	mPa·s(cP)	ASTM D 2196-86
- Cone & Plate	220-300	750-900	mPa·s(cP)	ISO 2884-1999
Density	1.1-1.2	1.1-1.2	g/cm <sup>3</sup>	ISO 2811-2001
Flash point	32	32	°C	ASTM D 3278-95
Gel time: 1.5% NORPOL PEROXIDE 1	10-25	10-25	minutes	G020
Storage stability from date of manufacture	4	4	months	G180

**MECHANICAL/PHYSICAL DATA FOR THE GELCOAT'S BASE POLYESTER RESIN IN CURED STATE**

Properties	Value	Unit	Test method
Tensile strength	min. 60	MPa	ISO 527-1993
Tensile modulus	min. 3500	MPa	ISO 527-1993
Tensile elongation	min. 2.0	%	ISO 527-1993
Heat distortion temp.	min. 105	°C	ISO 75-1993
Hardness Barcol	min. 35	934-1	ASTM D 2583-99

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## STORAGE

Products based on unsaturated polyester and vinyl ester are reactive materials and may undergo changes upon storage. In order to minimize these changes the product should be stored below 25°C and kept away from direct sunlight. Low temperature storage (below 18°C) is not problematic in terms of product quality, but it is important that the resin is heated to at least 18°C before use in order to assure proper curing.

Keep away from ignition sources (flames, pilot lights, electrical sparks, sparking tools etc.) NO SMOKING. Store separate from oxidizing materials, peroxides, and metal salts. Keep container closed when not in use. Avoid copper or copper-containing alloys. See Reichhold's guidelines for Storage, Handling, Safety and Waste for more information.

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