

Neogel® 8393-W-XXXX

VE MOULD GELCOAT

Neogel® 8393-W-XXXX spray gelcoat has been developed especially for the manufacture of moulds. It is recommended specifically for moulds subject to elevated temperatures in the production cycle and when high production rates are required.

Benefits

Neogel® 8393-W-XXXX has a combination of important characteristics: Easy application, very high gloss and Barcol hardness, superior mechanical properties and exceptional styrene resistance especially at elevated temperatures.

Application Characteristics

Neogel® 8393-W-XXXX is pre-accelerated, ready for use. It can be cured with standard MEKP (Butanox M50 or equivalent), without any foaming (microporosity), which is typical for many traditional vinyl ester resins. The gelcoat has excellent spray properties and can be applied with conventional spray equipment with the following recommended settings:

- Spray gun: nozzle \varnothing 2.5-3.5 mm, pressure 4-5 bar.
- Airless equipment: nozzle 19/40 or 17/40 for smaller moulds, pressure 3.5-4 bar, air assist maximum (6 bars). Due to the relatively small nozzle it is recommended to use an internal filter of 100 mesh at the spray gun.

Packaging, Storage and Handling Conditions

Neogel® 8393-W-XXXX is available in 22 kg packaging. It should be stored in the original closed packaging at a temperature not exceeding 20°C out of direct sunlight, and away from direct heat sources. Under these conditions, the product has a stability of 3 months from dispatch date.

Neogel® 8393-W-XXXX has a Flash Point of >21°C. It is FLAMMABLE and should be kept away from naked flames. Please refer to the SAFETY DATA SHEET.

Recommendations for Release Systems

Please make sure the final coating treatment of the plug or the model is fully cured before applying release system. The release system applied to the model (plug) has a critical influence on the successful mould making process. Most reliable are the various Carnuba waxes such as Honeywax, Mirroglaze, etc., which should be applied at least 5-6 times to the model.

A minimum of one hour should be allowed in between coats of wax to allow for sufficient hardening. The fully waxed mould should ideally be left over night before starting the application of the mould gelcoat. The instructions for application of each wax should be followed carefully. Whichever system is adopted, it is recommended to prepare a small test area on the model to confirm the effectiveness of release, before proceeding to a full mould situation.

In order to obtain optimum performance it is advisable to operate as follows:

- Stir each pail thoroughly but slowly before use. To prevent air entrapments do not use high shear mixing equipment.
- Temperature between 18°C and 25°C of gelcoat, model (plug) and working environment.
- Relative humidity below 75%.
- Cure with standard MEKP (or equivalent) peroxide solution and adjust amount between 1.5 – 2.0% according to ambient temperature.
- Thickness of the film 600-800 μ m wet.
- When sprayed the gelcoat film should be gradually built up in 4-5 passes of the spray gun to allow optimum air release. It is advised to apply film thickness gauge to ensure proper film thickness during application.
- Spray in correct distance (around 60 cm) and right angle relative to model surface.

- Apply back-up laminate as soon the gelcoat is sufficiently cured (firm film yet tacky to the touch). Under normal conditions, the curing period prior to lay- up will be \pm 2 hours.
- Post cure of the mould prior to use will enhance its long term performance.

Application Methods



Air atomised spray gun



Airless

Specification of Base Gelcoat

Characteristics	Test Method	Unit	Typical Value
Geltime at 25°C (2ml Butanox M50)	TM 2245	minutes	10-16
Peak temperature	TM 2245	°C	175-190
Viscosity at 25°C (#4, rpm2)	TM 5042	mPa.s	30000-36000
Viscosity at 25°C (#4, rpm20)	TM 5042	mPa.s	4000-5500

Characteristics of Cured Product

Characteristics	Test Method	Unit	Typical Value
Barcol Hardness	D 2583-67	—	> 45
HDT 66 PSI (*)	D 648	°C	> 130
Elongation at Break	D 639	%	> 3.0

(*) after 6 hours at 90°C

Available Colors

Color Shade	Product Code
Black	Neogel® 8393-W-0100
Orange	Neogel® 8393-W-0520
Light Green	Neogel® 8393-W-9617
Grey	Neogel® 8393-W-9737

Mould Protection

It is recommended that moulds should be suitably protected while not in use, especially when stored outside. This will prevent accidental scratches or changes to the original cosmetics due to extended water or sunlight exposure. It is common to store moulds protected with an application of standard gel coat and one layer of standard CSM GRP for easy removal. Alternatively, proprietary peel able coatings may be used after first checking they do not contain aggressive solvents and then testing on a non critical mould.

Storage Guidelines

The resin should be stored indoors in the original, unopened and undamaged packaging, in a dry place at temperatures between 5°C and 30°C.

Shelf life is reduced at higher temperatures and the properties of the resin might change during storage.

The shelf life of styrene containing unsaturated polyesters will be significantly reduced when exposed to light.

Store in dark and in 100% light tight containers only.

Material Safety

A Material Safety Data Sheet of this product is available on request.

Test Methods

Test methods (TM) referred to in the table(s) are available on request.

ISO 9001:2015 Certified

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2015 standards. This certification recognizes that each AOC facility has an internationally accepted model in place for managing and assuring quality. We follow the practices set forth in this model to add value to the resins we make for our customers.

About AOC

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Brochures

You can find additional information through Product Guide. For detailed information on the system solution, please consult our Gelcoat Brochure. Both brochures are available from our Business Technical Supports Engineer and Account Manager.

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