

Product data

Neogel ISO 2000

Applications

Neogel ISO 2000 is a family of pre-accelerated isophthalic gelcoats for brush application. It has been carefully formulated to give excellent brushing properties. The thixotropy has been adjusted to minimise sag on inclined and vertical surfaces. The material has good curing properties with excellent adhesion to the backing laminated. Modification of the gelcoat by the moulder is not recommended and users are therefore advised to follow the instructions contained in this Technical Data Sheet.

The ideal thickness for most applications is a cure thickness of 0.020 inches (0.5 mm). As a quick guide 675 g/m² of Neogel ISO 2000 when evenly applied, will give the required thickness.

All catalysts and pigments added to the gelcoat must be thoroughly mixed in. Pigment mixing should be carried out by a mechanical stirrer which should be of a type which does not introduce air, preferably air driven. Neogel ISO 2000 can be supplied transparent (2000-I-1) white (2000-W-1), or in a wide range of colours. It can be pigmented by the user using good quality pigment pastes, but users should assure themselves that the pigments are fully compatible with the gelcoat and suitable for the end application.

Principal properties

This resilient unsaturated polyester resin has medium reactivity. It has excellent brushing and levelling characteristics with minimal sag on vertical surfaces. Neogel ISO 2000-I-1 conforms to BS 3532 type >A= requirements. Approved by Lloyds Register of Shipping for use in construction of reinforced plastics craft moulded under the Society=s survey. It is also approved by the Water Research Council for use in contact with potable water.

Curing systems

The recommended catalyst for Neogel ISO 2000 is a 50% solution of medium reactivity MEKP. Low reactivity catalysts should not be used, and advice from catalyst manufacturers should be sought before >reduced hazard= catalysts are used.

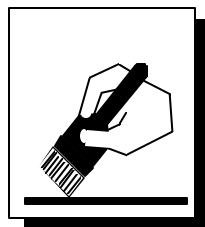
The recommended catalyst level is 2 parts per hundred of gel coat (by weight). Curing should be carried out at temperatures above 15°C. See the graph for details of the pot life of Neogel 2000-I-1 with various catalyst levels and at different temperatures.

Typical curing characteristics

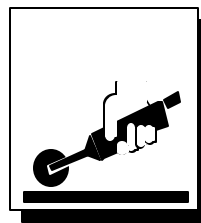
Typical curing characteristics	Method
Gel time (25°C), minutes*	13.5 BS 2782.835C

* using 1% medium activity MEKP catalyst

APPLICATION METHODS FOR NEOGEL ISO 2000



Brush



Roller

Product data uncured liquid gelcoat (2000-I-1)

Characteristic	Method	Unit	Typical values Neogel ISO 2000
Appearance	DSM TM 2265	comparison	hazy
Viscosity at 25°C	ISO 3219		thixotropic
Solids content	ISO 3251	%	63.5
Density at 25°C	ISO 2811	kg/ m ³	appr. 1120
Storage life at 20°C		months	3
Acid value	ISO 2114	mg KOH/g	13
Flash point	DSM TM 2800	°C	appr. 33
Colour on sight			pink

Typical physical properties of cast resin

Characteristic	Method	Unit	Typical values Neogel ISO 2000
Tensile strength	ISO 527	MPa	63
Tensile modulus	ISO 527	GPa	3.5
Elongation at break	ISO 527	%	3.4
Flexural strength	ISO 178	MPa	113
Flexural modulus	ISO 178	GPa	4.1
Temperature of deflection under load (at 1.8 MPa)	ISO 75	°C	78.5
Water absorption (1 day)	ISO 62	mg	19
Barcol hardness (GYZJ 934-1)	EN 59	%	35

Note:

The resin was catalysed with 1% medium activity MEKP catalyst and then allowed to gel and cure for 16 hours at room temperature followed by 3 hours at 70°C. Cast resin properties were determined on resin minus the thixotrope.