

Crestamould Essentials 4005PA

Tooling Resin for Mould Manufacture

Product overview

Crestamould® Essentials 4005PA is a tooling resin which has been designed for improved handling and cured properties compared to standard ortho-polyester resins. The low viscosity enables easy wet out of heavyweight reinforcements and the fillers reduce shrinkage which improves mould dimensional accuracy; it is catalysed with standard MEKP catalyst.

Features and Benefits

- Low exotherm and faster laminate build
- Low shrinkage
- Small to medium moulds can be built in a day saving time and cost
- High dimensional accuracy of the mould

Typical liquid properties

Property	Unit	Liquid Resin
Colour		White
Viscosity at 25°C (ICI Cone and Plate)	Poise	5.0
Specific Gravity at 25°C		1.27
Volatile Content	%	27
Gel Time ¹	Minutes	30
Shelf life ²	Months	5

Mechanical properties

Property	Unit	Laminate Properties	Test Method
Tensile Strength ³	MPa	110 – 120	ISO-75
Tensile Modulus ³	MPa	7800 – 8500	ISO 527-4
Elongation at Break ³	%	2 – 3	ISO 527-4
HDT of Compounded Product ⁴	°C	60 – 65	ISO-75
HDT of Base Resin ⁵	°C	94 – 103	ISO-75

Application

Crestamould® Essentials 4005PA is designed for hand-lay applications and must be allowed to attain a minimum workshop temperature of 18°C before use (20°C - 24°C is recommended). It should be mixed thoroughly prior to use and requires only the addition of MEKP catalyst to start the curing reaction. The recommended catalyst is a medium reactivity MEKP catalyst, which should be added at 1% into the resin and thoroughly dispersed. The recommended resin-to-glass ratio for chopped strand mat glass reinforcement is at least 3-to-1 by weight.

The design, complexity and size of the mould will determine optimum reinforcement levels and thickness. At least 3 layers of 450gsm chopped strand glass mat, or equivalent, is required and should be applied in a single operation consolidating between layers, to achieve sufficient cure and low shrink performance. The material will undergo a colour change becoming whiter as the curing reaction takes place.

Packaging

Crestamould® Essentials 4005PA is available in 25kg and 225kg containers.

Storage

Crestamould® Essentials 4005PA should be stored between 5°C - 25°C (41°F - 77°F) in the original, unopened container in a dry, well-ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents. If stored outside of the recommended storage conditions shelf life will be significantly reduced.

Health and Safety

See Separate Material Safety Data Sheet

Notes

1. Gel Time measured at 25°C with 1% Butanox M50 catalyst
2. Shelf life is defined from date of manufacture when stored at less than 20°C in original container
3. Glass content 28%, laminate made with 3 layers of 450gsm CSM; 16hrs at 40°C post cure
4. Property of the filled cast resin; 16hrs at 40°C post cure
5. When cured with 16hrs at 40°C plus 8hrs at 80°C

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