COLPOLY H 7030 I

Unsaturated Polyester Resin

Description:

Low viscosity hybrid Vinyl ester/DCPD resin dissolved in styrene.

Application:

Resin for construction purposes where better weather and hydrolytic stability are required, especially for large marine structures: sailing boats, yachts, etc. (vacuum–injection process).

Features and benefits:

- Excellent mechanical properties
- Good fatigue and chemical resistance
- Medium reactivity
- Outstanding durability.

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Clear	
Acid value	10 - 25 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.11 - 1.13 kg/L	MH1028 / ISO 2811
Styrene content	44 - 46%	MH2034
Viscosity; 25 °C, #2/20 rpm	180 - 210 mPa·s	MH1009 / ISO 3219
Flash point	34 °C	DIN 51 755
Shelf life at 25 °C in darkness	6 months	

Curing characteristics at 25 °C:

Property	Range	Method / According to standard
Gel time	90 - 120 minutes	MH 3021 / MH3023 100g resin, 0.2 % Co Acc. 6 % 1.0 % MEKP - 50
Time from gel to peak	30 - 50 minutes	
Exothermic temperature (peak)	150 - 170 °C	

Physical characteristics of cured nonreinforced base resin:

Property	Range	Method / According to standard
Density, 20 °C	1.20 - 1.24 kg/L	ISO 1183
Barcol hardness	35 - 40	EN 59
Tensile strength	60 - 70 MPa	ISO R 527
Elongation at break	2.5 - 3.5%	ISO R 527
Flexural strength	100 - 110 MPa	ISO 178
E - modulus in tension	3000 - 3200 MPa	ISO R 527
Impact resistance	15 - 20 kJ/m^2	ISO 179
Heat distortion temperature	85 - 95 °C	ISO 75 A
Glass transition temperature	110 - 115 °C	ISO 537

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Cure:

- It is recommended that gel time be checked in the customer's plant as age, temperature, humidity and catalyst will produce varied gel times.
- The catalyst level should not exceed 2.5% or fall below 1.0% for proper cure at 25 °C.
- The product should not be used when temperature condition is below 18 °C.

Handling and safety precautions:

Colpoly H 7030 I is flammable liquid and should be kept away from naked flames. For further details, please see the relevant Safety Data Sheet.