COLPOLY 7805

Unsaturated Polyester Resin

Description:

- Unsaturated polyester resin for GRP, based on isophthalic acid and standard glycols dissolved in styrene.
- COLPOLY 7805 is preaccelerated and thixotropic.
- **CAUTION**: Prolonged storage or unfavourable storage conditions may cause slight separation, hence agitation of the resin before use is recommended.

Application:

- General purpose applications hand lay-up and spray-up (boats, seats, containers, parts for car bodies, sporting equipment).
- Recommended laminate thickness applied wet-on-wet 2 - 8 mm.
- **It is recommended that all laminates that been heat-cured, exposed to direct sulight, or allowed to cure more than 48 hours at room temperature be sanded before the next laminate is applied.**

Features and benefits:

- Good outstanding mechanical properties.
- High resistance to hydrolysis.
- Low water absorption.
- Medium thixotropic index (2.5 – 3.5).

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Blue, opaque	
Acid value	10 - 20 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.10 - 1.12 kg/L	MH1028 / ISO 2811
Styrene content	44 - 48%	MH2034
Viscosity, 25 °C, #2/10 rpm	1000 - 1500 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:

S - version

Property	Range	Method / According to standard
Gel time	25 - 30 minutes	MH3021 / MH3023 100 g resin, 1.5% MEKP-50
Time from 25 °C to peak	35 - 45 minutes	
Exothermic temperature (peak)	150 - 170 °C	

W - version

Property	Range	Method / According to standard
Gel time	16 - 20 minutes	MH3021 / MH3023 100 g resin, 1.5% MEKP-50
Time from 25 °C to peak	25 - 35 minutes	
Exothermic temperature (peak)	170 - 190 °C	

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Physical characteristics of cured nonreinforced base resin:

Property	Range	Method / According to standard
Density, 20 °C	1.16 - 1.20 kg/L	ISO 1183
Barcol hardness	40 - 45	EN 59
Tensile strength	80 - 90 MPa	ISO R 527
Elongation at break	3.0 - 4.0%	ISO R 527
Flexural strength	110 - 120 MPa	ISO 178
E - modulus in tension	3000 - 3400 MPa	ISO R 527
Impact resistance	15 - 20 kJ/m^2	ISO 179
Heat distortion temperature	85 - 90 °C	ISO 75 A
Glass transition temperature	100 - 120 °C	ISO 537

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 7805 is flammable liquid and should be kept away from naked flames. For further details, please see the relevant Safety Data Sheet.