COLPOLY 7166

Unsaturated Polyester Resin

Description:

Unsaturated polyester resin based on isophthalic acid and neopentyl glycol (NPG), dissolved in styrene.

Application:

- Specially formulated resin for tanks, silos and pipes.
- Colpoly 7166 is used as an adhesion promoter between PVC and GRP in the construction of GRP tanks with PVC liners.

Features and benefits:

- Excellent mechanical strength.
- High HDT.
- Outstanding durability.

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Clear	
Acid value	10 - 20 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.05 - 1.35 kg/L	MH1028 / ISO 2811
Styrene content	41 - 45%	MH2034
Viscosity, 25 °C	330 - 410 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	20 - 30 minutes	MH3021 / MH3023 100 g resin, 0.25% Co Acc. 6% 1.5% MEKP-50
Time from 20 °C to peak	10 - 20 minutes	
Exothermic temperature (peak)	170 - 190 °C	

Physical characteristics of cured nonreinforced base resin:

Property	Range	Method / According to standard
Density, 20 °C	1.15 - 1.20 kg/L	ISO 1183
Barcol hardness	35 - 45	EN 59
Tensile strength	50 - 70 MPa	ISO R 527
Elongation at break	4.0 - 5.0%	ISO R 527
Flexural strength	70 - 90 MPa	ISO 178
E - modulus in tension	3200 - 3600 MPa	ISO R 527
Water absorption	< 1.5%	ISO 62
Heat distortion temperature	85 - 95 °C	ISO 75 A
Glass transition temperature	100 - 110 °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 ambient temperature.
- The product should not be used when temperature condition is below 18 °C.

Handling and safety precautions:

Colpoly 7166 is flammable liquid and should be kept away from naked flames. For further details, please see the relevant Safety Data Sheet.