

COLPOLY 7200 AI-G

Unsaturated Polyester Resin

Description:

- » Low viscosity unsaturated polyester resin for GRP, based on dicyclopentadiene and orthophthalic acid dissolved in styrene.
- » The resin is pigmented and pre-accelerated.

Application:

Resin for SCRIMP process (vacuum infusion).

Features and benefits:

- » Excellent mechanical properties.
- » Good cure properties at low peak exotherm.
- » Grey shade.

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Grey	
Acid value on solid resin	20 - 30 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.08 - 1.13 kg/L	MH1028 / ISO 2811
Styrene content	36 - 38%	MH2034
Viscosity; 25 °C, #2/20 rpm	180 - 200 mPa·s	MH1009 / ISO 3219
Efflux time, 20 °C, d = 4mm	50 - 55 s	MH1001
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
Time from 25 - 35 °C	50 - 65 minutes	MH3023 glass tube 1.5% MEKP-50
Time from 25 °C to peak	60 - 80 minutes	
Exothermic temperature (peak)	130 - 160 °C	
Gel time, 20 °C - winter version	80 - 90 minutes	MH3021 100 g resin, 1.0% MEKP-50
Gel time, 25 °C - summer version	80 - 90 minutes	

Physical characteristics of cured nonreinforced base resin (version with gel time 15 - 20 min, cured with 2% MEKP-50):

Property	Range	Method / According to standard
Density, 20 °C	1.14 - 1.18 kg/L	ISO 1183
Barcol hardness	40 - 45	EN 59
Tensile strength	70 - 75 MPa	ISO R 527
Elongation at break	2.5 - 3.0%	ISO 178
Flexural strength	95 - 115 MPa	ISO 178
E - modulus in tension	3600 - 3800 MPa	ISO R 527
Impact resistance	12 - 15 kJ/m ²	ISO 179
Heat distortion temperature	85 - 95 °C	ISO 75 A
Glass transition temperature	100 - 105 °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 product should not be used when temperature condition is below 18 °C.

Handling and safety precautions:

- » Colpoly RH 7200 AI-G is flammable liquid and should be kept away from naked flames.
- » It is highly recommended that resin is stored at stable temperatures between 5 °C and 35 °C, preferably indoors, and away from direct sunlight.
- » Shelf life is reduced at higher temperatures and properties like viscosity and gel time of the resin might change during storage.

Disclaimer

This data is based on experience, for its completeness, we assume no liability. As we take no influence on the processing, it lies within the obligation of the customer to test, whether it is suitable for the intended purpose, before using the product. Any change in the processing procedure, the environmental conditions or the failure to comply with instructions may unfavorably influence the result. This Technical Datasheet is available on our website at www.helios.si. Should there be any discrepancies between this document and the version that appears on the website, then the version on the Website will take precedence.

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