

COLPOLY 7310 A-80

Unsaturated Polyester Resin

Description:

- » Unsaturated polyester resin for GRP, based on dicyclopentadiene and orthophthalic acid dissolved in styrene.
- » Colpoly 7310 A-80 is preaccelerated, low viscosity resin and contains color change indicator.

Application:

- » Resin is formulated to be filled with inorganic fillers and design for use with spray-up systems for lamination to acrylic sheet.
- » **WARNING:** The large number of substrates which are available on the PMMA/ABS market, we recommend that customers should first carry out an adhesion test on the intended substrate before any industrial application.

Features and benefits:

- » Good excellent mechanical and wetting properties.
- » Rapid cure at low peak exotherm.
- » Good adhesion to acrylics (especially PMMA).

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Blue, opaque	
Acid value	15 - 25 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.04 - 1.08 kg/L	MH1028 / ISO 2811
Styrene content	35 - 41%	MH2034
Viscosity, 25 °C, #2/20 rpm	100 - 150 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
Time from 25°C to 35°C	7 - 9 minutes	MH3023 Glass tube, 2.0% MEKP-50
Time from 25°C to peak	20 - 24 minutes	
Exothermic temperature (peak)	115 - 125 °C	

Physical characteristics of cured nonreinforced base resin:

Property	Range	Method / According to standard
Density, 20 °C	1.14 - 1.18 kg/L	ISO 1183
Barcol hardness	35 - 45	EN 59
Tensile strength	65 - 70 MPa	ISO R 527
Elongation at break	2.0 - 3.0%	ISO R 527
Flexural strength	90 - 110 MPa	ISO 178
E - modulus in tension	3600 - 3800 MPa	ISO R 527
Impact resistance	10 - 15 kJ/m ²	ISO 179
Heat distortion temperature	65 - 75 °C	ISO 75 A
Glass transition temperature	90 - 100 °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 7310 A-80 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.
- » For further details, please see the relevant Safety Data Sheet.

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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