

COLPOLY 721 S

Unsaturated Polyester Resin

Description:

- » Unsaturated polyester resin for GRP, based on dicyclopentadiene, orthophthalic acid and standard glycols, dissolved in styrene.
- » The resin has medium reactivity and viscosity, contains a UV stabilizer.
- » UV absorbers absorb the UV component of sunlight and are not 100% effective and with time the UV absorber is overcome.
- » The rate depends on the actual climatic conditions experienced, resulting in possible colour change and/or surface degradation.

Application:

- » General purpose applications hand lay-up and spray-up (boats, seats, containers, parts for car bodies, sporting equipment)
- » Recommended for GFR flat and corrugated sheets.
- » Recommended laminate thickness applied wet-on-wet 3 - 8 mm.

Features and benefits:

- » Excellent mechanical strength.
- » High impact strength.
- » Medium / fast cure.
- » Outstanding durability.

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Slightly hazy	
Acid value	20 - 30 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.11 - 1.13 kg/L	MH1028 / ISO 2811
Styrene content	34 - 37%	MH2034
Viscosity; 25 °C, #2/20 rpm	230 - 250 mPa·s	MH1009 / ISO 3219
Refractive index, 20 °C	1.542 - 1.545	MH1035 / DIN 51423 P1
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	7 - 9 minutes	MH3021 / MH3023 100 g resin; 0.2% Co Acc. 6%, 2.0% AAP-K3
Time from 25 °C to peak	4 - 7 minutes	
Exothermic temperature (peak)	175 - 195 °C	

Note: The information contained herein is provided in good faith and is to the best of our knowledge accurate, but we assume no liability for its accuracy or completeness. Therefore, the buyer is advised to determine the suitability of this product for the intended use. We retain the right to make any changes according to technological progress or further developments. For safety information please refer to the current Material Safety Data Sheet.

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Curing characteristics at 80 °C:

Property	Range	Method / According to standard
Time from 65 °C to 90 °C	1.5 - 2.5 minutes	MH3024 2.0% MIBK (TRIGONOX HM)
Time from 65 °C to peak	3 - 5 minutes	
Exothermic temperature (peak)	200 - 220 °C	

Physical characteristics of cured nonreinforced base resin:

Property	Range	Method / According to standard
Density, 20 °C	1.21 - 1.23 kg/L	ISO 1183
Barcol hardness	35 - 45	EN 59
Tensile strength	58 - 62 MPa	ISO R 527
Elongation at break	2.0 - 3.0%	ISO R 527
Flexural strength	85 - 105 MPa	ISO 178
E - modulus in tension	3300 - 3500 MPa	ISO R 527
Impact resistance	8 - 12 kJ/m ²	ISO 179
Heat distortion temperature	80 - 85 °C	ISO 75 A
Glass transition temperature	115 - 125 °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 721 S is flammable liquid and should be kept away from naked flames. For further details, please see the relevant Safety Data Sheet.

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