

## 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	

#### 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	

#### TECHNICAL DATASHEET

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**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 <sup>2</sup>	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.

**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](http://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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