

## COLPOLY 739 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 an 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 1 - 5 mm.

#### Features and benefits:

- » Excellent mechanical strength.
- » High impact strength.
- » Outstanding durability.
- » Rapid wet out of the reinforcement pack.

#### Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Slightly hazy	
Acid value	15 - 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	1.541 - 1.543	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	

**Physical characteristics of cured nonreinforced base resin:**

Property	Range	Method / According to standard
Density, 20 °C	1.20 - 1.23 kg/L	ISO 1183
Barcol hardness	40 - 45	EN 59
Tensile strength	50 - 70 MPa	ISO R 527
Elongation at break	2.0 - 3.0%	ISO R 527
Flexural strength	110 - 130 MPa	ISO 178
E - modulus in tension	3500 - 4000 MPa	ISO R 527
Impact resistance	18 - 22 kJ/m <sup>2</sup>	ISO 179
Heat distortion temperature	95 - 100 °C	ISO 75 A
Glass transition temperature	110 - 130 °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 ambient temperature.
- » The product should not be used when temperature condition is below 18 °C.

**Handling and safety precautions:**

Colpoly 739 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.

**TECHNICAL DATASHEET**

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