COLPOLY 736 WAT

Unsaturated Polyester Resin

Description:

- Unsaturated polyester resin for GRP, based on dicyclopentadiene and orthophthalic acid dissolved in styrene.
- The resin is white pigmented (W), pre-accelerated (A) and low thixotropic (T) to prevent sedimentation of inorganic fillers.
- Resin contains color change indicator and barrier-forming agents to reduce styrene emission.
- **CAUTION**: Prolonged storage or unfavorable storage conditions may cause slight separation, hence agitation of the resin before use is recommended.

Application:

- Resin is formulated to be filled with inorganic fillers and design for use with spray-up systems for lamination to acrylic sheet.
- **WARNING**: Since large number of substrates 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:

- Excellent mechanical and wetting properties.
- Rapid cure at low peak exotherm.
- Good adhesion to acrylics (especially PMMA) and ABS.
- Low thixotropic index (1.5 - 2.5; #2, 5/50 rpm).

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Light blue to white	
Acid value	15 - 25 mg KOH/g	MH1051 / ISO 2114
Density, 25 °C	1.04 - 1.08 kg/L	MH1028 / ISO 2811
Styrene content	36 - 40%	MH2034
Viscosity; 25 °C, #2/20 rpm	150 - 250 mPa·s	MH1009 / ISO 3219
Flash point	34 °C	DIN 51 755
Shelf life at 25 °C in darkness	6 months	

Curing characteristics at 20 °C:

Property	Range	Method / According to standard
Gel time	14 - 18 minutes	MH3021 / MH3023 100 g resin, 2.0% MEKP-50
Time from 25 °C to peak	12 - 18 minutes	
Exothermic temperature (peak)	140 - 160 °C	

Issue Date: April 2025

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	85 - 90 °C	ISO 75 A
Glass transition temperature	105 - 115 °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 736 WAT is flammable liquid and should be kept away from naked flames. For further details, please see the relevant Safety Data Sheet.