



SAMRAT POLY RESINS

Manufacturer of Coating & Composite Resins · Doraha, Ludhiana, Punjab, India

TECHNICAL DATA SHEET

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ISO POLYESTER RESIN

Isophthalic Unsaturated Polyester Resin · Water, Chemical and Weathering Service

PRODUCT DESCRIPTION

ISO Polyester Resin is an isophthalic unsaturated polyester resin manufactured by Samrat Poly Resins. Isophthalic resins are built on isophthalic acid rather than the phthalic anhydride used in general-purpose orthophthalic grades. That difference allows a higher-molecular-weight polyester chain, which is why isophthalic resins are normally specified where a laminate faces water immersion, chemical service or sustained outdoor conditions rather than routine dry FRP work.

KEY FEATURES

- Isophthalic backbone rather than the orthophthalic chemistry used in general-purpose grades
- Positioned for chemical, water and hydrolysis resistance in FRP service
- Room-temperature cure with MEKP catalyst and cobalt octoate accelerator
- Off-white to light beige liquid
- Supplied in 225 kg industrial drums

RECOMMENDED APPLICATIONS

- Laminates facing water immersion or sustained damp service
- Chemical service FRP where a resistance requirement applies
- Components in sustained outdoor conditions
- Tanks, linings and corrosion-resistant FRP

PRODUCT SPECIFICATION

IDENTITY AND SUPPLY	
Resin Type	Isophthalic Unsaturated Polyester Resin
Grade	ISO Polyester Resin
Colour / Appearance	Off-white to light beige liquid
Acceleration Status	Non-accelerated
Packaging	225 kg industrial drum
Country of Origin	India
LIQUID RESIN PROPERTIES	
Viscosity	500 cPs (mPa·s) at 25 °C
Gel Time	15 minutes at 25 °C
Peak Exotherm Temperature	190 °C
Time to Peak Exotherm	25 minutes
Specific Gravity	1.12 g/cm ³ at 25 °C
Styrene Content	40% by weight
Acid Value	16 mg KOH/g
CURE SYSTEM	
Curing System	MEKP catalyst with cobalt octoate accelerator
Recommended Catalyst Dosage	MEKP 1.5% by weight of resin
Recommended Accelerator Dosage	Cobalt octoate 0.4% by weight of resin
CURED RESIN PROPERTIES	
Heat Deflection Temperature	90 °C
Tensile Strength	75 MPa
Tensile Modulus	3,500 MPa
Elongation at Break	3.0%
Flexural Strength	125 MPa
Flexural Modulus	3,700 MPa
Barcol Hardness	42
Water Absorption	0.15% by weight after 24 h
SAFETY AND STORAGE	
Flash Point	34 °C, closed cup
Shelf Life	3 months
Storage Temperature	15–25 °C

Storage Conditions

Original sealed containers; cool, dry, shaded and well ventilated. Protect from direct sunlight, heat and ignition sources.

Values are typical values supplied by Samrat Poly Resins for this grade and are not guaranteed limits.

GRADE SELECTION

Where the requirement is routine general-purpose FRP lamination rather than chemical or water service, the orthophthalic grades GP Clear Resin and Unsaturated Polyester Resin are the usual route. Where the service medium is aggressive and a stated chemical-resistance requirement applies, review Vinyl Ester Resin as well. Share the FRP component, service medium and operating condition with your enquiry so the right grade can be confirmed.

SAFETY & HANDLING

Handle with appropriate personal protective equipment and adequate ventilation. Unsaturated polyester resins contain styrene, which is flammable. Keep away from heat, sparks and open flame. **Never mix the MEKP catalyst directly with the cobalt accelerator. Add each separately into the resin — direct contact between the two can react violently.** Refer to the applicable Safety Data Sheet (SDS) before handling.

Disclaimer: The information above is based on data published by the manufacturer at the time of issue and is believed accurate. Values shown are typical and are not to be interpreted as guaranteed specifications; properties may vary within normal manufacturing tolerances between batches. Users are responsible for determining suitability for their intended application and should confirm current specifications directly with Samrat Poly Resins prior to use.