

Halogenated Fire Retardant Resin - 28.00

espol™ is the brand name / trademark of the unsaturated polyester resin processed at Satyen Polymers. Our resins are tailor made to meet the diverse needs of GRP/FRP industry. espol™ complies with requirements of companies interested in improved efficiency and superior performance of their finished product.

PRODUCT FEATURES & BENEFITS:

The superior Fire Retardant Polyester Resin espol™ 28.00 is a semi rigid, medium reactivity Orthophthalic resin additive type halogenated designed for special jobs to fabricate engineering equipment/components for exterior applications like cooling tower, chimney (stack) etc and coating over fabricated M.S Structures, (after proper preparation) with fibreglass for resistance against corrosion in salt water, heat resistance and fire retardancy complying to self extinguishing behaviour as per IS-6746-Type IV & V.

TYPICAL APPLICATIONS:

- Automobile Components
- Cooling tower
- Chimney

PHYSICAL DATA IN LIQUID STATE AT 25⁰C# [Confirm to IS 6746-1994 and BS 3532 - 1990]

Properties	Units	Values	Test Method
Appearance	-	Milky White Viscous Liquid	(TM-01)
Specific Gravity	-	1.25 ± 0.02	(TM-11)
Viscosity • Ford Cup 4 @ 30 ⁰ C • Brookfield RVT model #	Seconds mPa s(cps)	170 ± 20 1000 ± 200	(TM-04) (TM-05)
Volatile Content	%	33 ± 3	(TM-08)
Acid Value	mg-KOH/gm	22 ± 3	(TM-06)
Gel time @ 30 ⁰ C	Minutes Minutes	15 - 25* 10 - 15 ω	(TM-07)
Peak Exotherm Temp.	⁰ C	145 - 165	(TM-07)

* Using Accelerator, Co (2%) 1 ml, Catalyst, MEKP1.5ml, the gel time, cure time and Peak Exotherm measured.

* Summer ω Winter [TM - Test Method as per ISO-9001-2000-DOC-REV-03]

PROPERTIES OF CAST RESIN LAMINATE:

Properties	Units	Values	Test Standards
a) Barcol Hardness	BHU	35	ASTM D - 2583
b) Heat Distortion Temp.	⁰ C	70 ± 10	ISO - R75
c) Specific Gravity	-	1.35 ± 0.03	ISO - R1183
d) Volume Shrinkage on cure	%	7 - 8	Sp. Gr. Method
e) Tensile Strength	N/sq.mm	50 ± 5	ISO - R 527
f) Tensile Modulus	N/sq.mm	3000 ± 100	ISO - R 527
g) Elongation at break	%	2.0 - 3.0	ISO - R 527

h) Flexural Strength	N/sq.mm	90 ± 10	ISO - 178
i) Flexural Modulus	N/sq.mm	3000 ± 200	ISO - 178

* When post cured after maturation.

USAGE:

The general purpose polyester resin performs best if the laminate is completely post cured. The quantity of catalyst and accelerator can be adjusted to get a shorter or longer geltime. The Accelerator must be completely mixed before catalyst is added in order to avoid a direct blending which may cause an explosion.

POST CURING:

It is recommended to mature the products for 24 hours and post curing should be done for minimum of five hours at 80°C, or 2-3 weeks at room temperature. This is essential for getting the optimum properties.

STORAGE / HANDLING:

The polyester resin remains stable for 1 months at 30°C in the dark and 4 months at 25°C. The resin stability deteriorates markedly at elevated temperature, especially when exposed to direct sunlight. The FR resin should be thoroughly mixed every time before taking the material for fabrication.

espoI™ 28.00 has a flash point more than 34°C and is classified as flammable. "No smoking" rules should be strictly followed. In case of spillage, use sand or earth to absorb and shovel off for disposal as per local regulations, In case of fire, use dry chemical foam, Carbon dioxide or water spray to extinguish the flame. The FR resin should be thoroughly mixed every time before taking the material for fabrication.

PACKING:

The Polyester resin is packed in HDPE carboys (30, 35, 40 & 45 kgs) and epoxy coated steel drums HDPE barrels (220 kgs) of standard size net weight. Special packing size offered for projects on returnable containers. Technical services are also provided to comply standards.

HEALTH & SAFETY:

Never add metal salts (Accelerator) or Pre Acceleratorated resin to Peroxides when adding peroxides to a resin solution, mix thoroughly the resulting product Do not add organic peroxides to a hot diluents or process. Prevent contamination of Accelerator, promoter from materials like (Iron Copper, Cobalt) salts, storing acids and sanding dusts. Suggested containers are glass, polypropylene, Teflon, Poly-ethylene or stainless steel to prevent contamination of material during its handling.