

Ortho Resin Boat Grade 43.00

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 :

espol™ 43.00 Ortho Marine / sanitary grade is a quick-curing superior phthalic anhydride glycol based unsaturated polyester resin for general purpose applications. It is neither waxed nor pre-accelerated and suitable for both hand lay-up application and gun spray application. However, gun spray-up application is preferable because it can apply the resin evenly and spreading a thin coat without any pinholes. This grade is approved by Indian Register of shipping (IRS) for the fabrication of fishing Trawlers. espol™ 43.00 resin coated surface is glossy after cured. It has good mechanical properties and water resistance and is resistance to mild chemicals and ultra-violet light, thus enhancing the durability of glassfibre reinforced plastics (GRP) products. Besides, the time between gelation and cure is short for espol™ 43.00 resin and espol™ 20.00 gelcoat and therefore productivity can be increased.

TYPICAL APPLICATIONS :

- Fishing Trawlers/speed boats/ sanitary Mouldings for kitchen/bath

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

Properties	Units	Values	Test Method
Appearance	-	Pale Yellow	(TM-01)
Specific Gravity	-	1.13 ± 0.02	(TM-11)
Viscosity • Ford Cup 4 @ 30 ⁰ C • Brookfield RVT model #	Seconds mPa s(cps)	120 ± 10 500 - 600	(TM-04) (TM-05)
Volatile Content	%	33 ± 3	(TM-08)
Acid Value	mg-KOH/gm	25 ± 4	(TM-06)
Gel time @ 30 ⁰ C	Minutes Minutes	15 - 20* 12 - 18 ω	(TM-07)
Peak Exotherm Temp.	⁰ C	140 - 160	(TM-07)

* Using Accelerator, Co (2%) 1 ml, Catalyst, MEKP 1.5ml, 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	75 ± 5	ISO - R75
c) Specific Gravity	-	1.20 ± 0.02	ISO - R1183
d) Volume Shrinkage on cure	%	7 - 8	ISO - 3521
e) Tensile Strength	N/sq.mm	55 ± 5	ISO - R 527
f) Tensile Modulus	N/sq.mm	3500 ± 100	ISO - R 527
g) Elongation at break	%	2.5 - 3.5	ISO - R 527
h) Flexural Strength	N/sq.mm	120 ± 10	ISO - 178
i) Flexural Modulus	N/sq.mm	3200 ± 100	ISO - 178

* When post cured after maturation.

USAGE:

The Superior ortho marine/sanitary polyester resin performs best if the laminate is completely cured. The quantity of catalyst and accelerator can be adjusted to get a shorter or longer gel time.

It is recommended to mature the products for 24 hours and post curing should be done for minimum of three hours at 80 deg cent, and 2/3 weeks at or more room temperature. This is essential for getting the optimum properties.

STORAGE / HANDLING:

The polyester resin remains stable for 3 months at 30⁰C in the dark and 4 months at 25⁰C. The resin stability deteriorates markedly at elevated temperature, especially when exposed to direct sunlight. espol 41.00 has a flash point of 34⁰C 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.

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 Accelerated 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.

