



Introduction

espol™ 12.01 is a pre-accelerated orthophthalic polyester resins which rapidly wets out reinforcements. It is a general-purpose resin and has been specifically designed for non-critical and industrial applications. It is not suitable for boat construction, chemical resistance or mouldings in contact with food products.

Applications

espol™ 12.01 is designed for hand laminating, spray up & casting applications, it can be used with all types of E-glass such as chopped strand mat, woven roving and multi axial.

Formulation

espol™ 12.01 should be allowed to attain workshop temperature (25°C - 30°C) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. espol™ 12.01 requires the addition of catalyst to start the curing reaction.

The recommended catalyst is MEKP (50%) which should be added to the resin at 1 - 2% and thoroughly incorporated into the resin, using a low shear mechanical stirrer where possible.

(Please consult our Technical Support Department if other catalysts are to be used).

Physical data - uncured

The following tables give typical properties of espol™ 12.01 when tested to IS 6746-1994 (Reaffirmed 2005).

Property	Unit	Liquid
Appearance	-	Pinkish
Specific gravity	-	1.10 - 1.14
Viscosity at 25°C*	cP	450 - 550
Acid Value	mg-KOH/gm	22 - 28
Volatile Content	%	30 - 36
Geltime at 30°C**	Minutes	9 -15
Peak Exotherm Temp**	°C	170 - 190
Stability from date of manufacture when stored in accordance with storage recommendations.	months	3

*Viscosity measured using Brookefield (RVT Model) Viscosity SPL 1 / SPD 10

**100g resin + 1.5ml MEKP (50%) Catalyst.

Physical data - cured

Property	Unit	Fully cured*
Barcol hardness		40
Deflection temperature under load* (1.80MPa)	°C	70
Tensile strength*	MPa	45 - 55
Tensile modulus*	MPa	3000 - 3100
Elongation at break*	%	1.5 - 2.5
Flexural strength*	MPa	70 - 90
Flexural modulus*	MPa	3000 - 3200

*Curing Schedule - 24 hours at 20°C, 6 hours at 80°C.

Post Curing

Satisfactory laminates for many applications can be made from espol™ 12.01 by curing at workshop temperature (25°C). For optimum properties, however, laminates should be post-cured before being put into service. The laminate should be allowed to cure for 24 hours at 25°C, and then be oven cured for a minimum of 6 hours 80°C.

Storage

espol™ 12.01 should be stored between 5°C and 25°C in the original, unopened container in a dry, well ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents. If stored outside of these recommendations, shelf life will be significantly reduced.

Packaging

espol™ 12.01 is available in 35kg, 220kg and bulk containers.

Health and Safety

Please see separate Material Safety Data Sheet.

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