



### Introduction

espol™ 60.00 is a non-accelerated orthophthalic polyester resin which is formulated using sustainable resources derived from standard bottle grade PET. It is a general-purpose grade and is suited for non-critical industrial applications. It is quick curing and imparts the product with good mechanical properties, impact & water resistance.

### Applications

espol™ 60.00 is designed primarily for hand lamination process. It is compatible to standard E-glass fibres such as chopped strand mat, woven roving and multi axial.

### Formulation

espol™ 60.00 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™ 60.00 requires the addition of cobalt promoter and catalyst to start the curing reaction.

The recommended accelerator is Cobalt (1% solution in styrene) which should be added to the resin at 1 - 2% and thoroughly incorporated into the resin, using a low shear mechanical stirrer where possible.

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).

**N.B.** Catalyst and accelerator must not be mixed directly together since they can react with explosive violence.

### Physical data - uncured

The following tables give typical properties of espol™ 60.00 when tested to IS 6746-1994 (Reaffirmed 2005).

Parameter	Unit	Liquid properties
Appearance	-	Light green clear viscous liquid
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 Brookfield (LVT Model) Viscosity SPL 3 / SPD 60

\*\*100g resin + 1 ml Cobalt (2%) +1.5ml MEKP (50%) Catalyst.

## Physical data - cured

Property	Unit	Fully cured*
Barcol hardness		38
Deflection temperature under load* (1.80MPa)	°C	65
Tensile strength*	MPa	45 - 50
Tensile modulus*	MPa	2800 - 3000
Elongation at break*	%	1.5 - 2.5
Flexural strength*	MPa	70 - 80
Flexural modulus*	MPa	2800 - 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™ 60.00 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™ 60.00 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™ 60.00 is available in 35kg, 220kg and bulk containers.

## Health and Safety

Please see separate Material Safety Data Sheet.

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