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## Erapol ET75D

POLYETHER (PTMEG) TDI PREPOLYMER

# TECHNICAL DATASHEET

**Erapol ET75D** is a liquid isocyanate terminated pre-polymer based on PTMEG polyether polyol.

Polymers made from **Erapol ET75D** exhibit high impact strength coupled with outstanding abrasion and chemical resistance as well as high load bearing capacity.

## Application

Typical uses for this polymer include forklift truck tyres, rolls, gears etc.

## Product Specification

% NCO	11.20 ± 0.25
Specific Gravity @ 25°C	1.11
Viscosity @ 80°C (cps)	300 - 700
Colour	Clear, light amber

## Mixing and Curing Conditions

		ET75D / MOCA	ET75D / Ethacure 300
Erapol ET75D	(pph)	100	100
MOCA Level	(pph)	30.5	-
Ethacure 300 Level	(pph)	-	24.5
Recommended % Theory		85	85
Erapol Temperature	(°C)	60 - 65	55 - 65
Curative Temperature	(°C)	110 - 120	20 - 30
Pot Life	(mins)	< 1	< 1
Demould Time @ 110°C	(hrs)	< 1	1
Post Cure Time @ 110°C	(hrs)	16	16



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## Physical Properties

Properties presented below are to be used as a guide and not intended for specification purposes.

		ET75D / MOCA	TEST METHOD
<b>Hardness</b>	(Shore D)	75 ± 3	AS1683.15
<b>Tensile Strength</b>	MPa (psi)	54.0 (7832)	AS1683.11
<b>100% Modulus</b>	MPa (psi)	31.0 (4496)	AS1683.11
<b>300% Modulus</b>	MPa (psi)	41.0 (5947)	AS1683.11
<b>Angle Tear Strength, Die C</b>	(kN/m)	110	AS1683.12
<b>Elongation</b>	(%)	200	AS1683.11
<b>DIN Resilience</b>	(%)	-	DIN53512
<b>DIN Abrasion Resistance 10N</b>	(mm <sup>3</sup> )	115	AS1683.21
<b>DIN Abrasion Resistance 5N</b>	(mm <sup>3</sup> )	38	AS1683.21
<b>Compression Set / 22 hr @ 70°C</b>	(%)	50	AS1683.13
<b>Cured Specific Gravity</b>	(g/cm <sup>3</sup> )	1.20	AS1683.4

## Processing Procedure

1. **Erapol ET75D** should be heated to the recommended processing temperature and thoroughly degassed at 1 - 5 mm Hg of vacuum until excessive foaming stops.
2. The curative should be added to ET75D, the MOCA melted at 110 - 120°C prior to mixing and Ethacure 300 processed at room temperature. During mixing be careful not to introduce air into the mixture.
3. Pour mixed materials into moulds that have been preheated at 100 - 110°C and pre-coated with release agent.

**NOTE:** If post cure temperature is less than 100 - 110°C, the polymer may have a glassiness/brittle appearance.

## Adhesion

Adhesion of Erapol based elastomers to various substrates is at best marginal if a primer is not used. Please consult Era Polymers for specific recommendations to improve adhesion.

## Handling Precautions

**Erapol ET75D** contains small amounts of free TDI. Therefore the product should be used in well-ventilated areas. Avoid breathing in vapours and protect skin and eyes from contact.

In case of skin contact, immediately remove excess, wash with soap and water. For eye contact, immediately flush with water for at least 15 minutes. Call a physician.

If nose, throat or lungs become irritated from breathing in vapours, remove exposed person to fresh air. Call a physician.