Erapol ET60D

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol ET60D is a high performance liquid isocyanate terminated prepolymer based on PTMEG polyether polyol.

Polymers made from **Erapol ET60D** exhibit high impact strength coupled with excellent abrasion, hydrolysis resistance 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	7.40 + 0.25
Specific Gravity @ 25°C	1.06
Viscosity @ 80°C (cps)	300 - 700
Colour	Clear, light amber

Mixing and Curing Conditions

		ET60D / MOCA	ET60D / Ethacure 300
Erapol ET60D	(pph)	100	100
MOCA Level	(pph)	21.0	-
Ethacure 300 Level	(pph)	-	17
Recommended % Theory		90	90
Erapol Temperature	(°C)	60 - 65	55 - 65
Curative Temperature	(°C)	110 - 120	20 - 30
Pot Life	(mins)	3	2
Demould Time @ 110°C	(hrs)	1	1
Post Cure Time @ 110°C	(hrs)	16	16

Physical Properties

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

		ET60D/MOCA	TEST METHOD
Hardness	(Shore D)	60 $\pm$ 3	AS1683.15
Tensile Strength	MPa (psi)	45.0 (6527)	AS1683.11
100% Modulus	MPa (psi)	19.3 (2799)	AS1683.11
300% Modulus	MPa (psi)	42.7 (6193)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	120	AS1683.12
Elongation	(%)	330	AS1683.11
DIN Resilience	(%)	-	DIN53512
DIN Abrasion Resistance 10N	(mm^3)	100	AS1683.21
DIN Abrasion Resistance 5N	(mm^3)	33	AS1683.21
Compression Set / 22 hr @ 70°C	(%)	45	AS1683.13
Cured Specific Gravity	(g/cm^3)	1.16	AS1683.4

Processing Procedure

1.   **Erapol ET60D** should be heated to the recommended processing temperature and thoroughly degassed at 1 - 5 mm Hg of vacuum until excessive foaming stops.

2.   MOCA and Ethacure 300 should be added to **ET60D**, the MOCA must first be melted at 110 - 120°C prior to mixing and Ethacure 300 at room temperature. After adding MOCA, mix thoroughly being careful not to introduce air into the mixture.

3.   Pour mixed materials into moulds that have been preheated to 100 - 110°C and pre-coated with release agent.

NOTE: If curing 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 ET60D 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.