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Erapol ET65D

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol ET65D is a high performance liquid isocyanate terminated prepolymer based on PTMEG polyether polyol.

Polymers made from **Erapol ET65D** 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	8.00 ± 0.25
Specific Gravity @ 25°C	1.11
Viscosity @ 80°C (cps)	300 - 700
Colour	Clear, light amber

Mixing and Curing Conditions

		ET65D / MOCA	ET65D / Ethacure 300
Erapol ET65D	(pph)	100	100
MOCA Level	(pph)	22.0	-
Ethacure 300 Level	(pph)	-	17.5
Recommended % Theory		85	85
Erapol Temperature	(°C)	60 - 65	55 - 65
Curative Temperature	(°C)	110 - 120	20 - 30
Pot Life	(mins)	2	2
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.

		ET65D/MOCA	TEST METHOD
Hardness	(Shore D)	65 ± 3	AS1683.15
Tensile Strength	MPa (psi)	48.0 (6962)	AS1683.11
100% Modulus	MPa (psi)	29.0 (4206)	AS1683.11
300% Modulus	MPa (psi)	38.0 (5511)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	115	AS1683.12
Elongation	(%)	280	AS1683.11
DIN Resilience	(%)	-	DIN53512
DIN Abrasion Resistance 10N	(mm ³)	110	AS1683.21
DIN Abrasion Resistance 5N	(mm ³)	35	AS1683.21
Compression Set / 22 hr @ 70°C	(%)	48	AS1683.13
Cured Specific Gravity	(g/cm ³)	1.13	AS1683.4

Processing Procedure

1. **Erapol ET65D** should be heated to the recommended processing temperature and thoroughly degassed at 1 - 5 mm Hg of vacuum until excessive foaming stops.
2. MOCA should be added to **ET65D**, the MOCA must first be melted at 110 - 120°C and Ethacure 300 at 25°C prior to mixing. 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 ET65D 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 and 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.