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AUSTRALIA
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Erapol ETX65D

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol ETX65D is a liquid isocyanate terminated pre-polymer based on the high performance PTMEG polyether polyol.

When reacted with MOCA the product produces a polyether elastomer with a hardness of **65 Shore D**, but has been designed to have a long pot life.

Polymers made from Erapol **ETX65D** exhibit high impact strength coupled with outstanding abrasion and chemical resistance as well as high load bearing capacity.

Application

Successful applications include rigid wear parts for mining and industrial use, drive pulleys, pads, hydro cyclone parts, feed and distributor boxes, gears etc.

Product Specification

% NCO	8.00 ± 0.25
Specific Gravity @ 25°C	1.10
Viscosity @ 80°C (cps)	400 - 800
Colour	Clear, light amber

Mixing and Curing Conditions

		ETX65D / MOCA	ETX65D / Ethacure 300
Erapol ETX65D	(pph)	100	100
MOCA Level	(pph)	23.0	-
Ethacure 300 Level	(pph)	-	18.4
Recommended % Theory		90	90
Erapol Temperature	(°C)	60 - 65	55 - 65
Curative Temperature	(°C)	110 - 120	25
Pot Life	(mins)	4	3
Demould Time @ 110°C	(hrs)	< 1	1
Post Cure Time @ 110°C	(hrs)	24	24

Physical Properties

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

		ETX65D / MOCA	TEST METHOD
Hardness	(Shore D)	65 ± 5	AS1683.15
Tensile Strength	MPa (psi)	48.0 (6962)	AS1683.11
100% Modulus	MPa (psi)	27.0 (3916)	AS1683.11
200% Modulus	MPa (psi)	37.0 (5366)	AS1683.11
300% Modulus	MPa (psi)	37.0 (5366)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	310	AS1683.12
Elongation	(%)	300	AS1683.11
DIN Resilience	(%)	-	DIN53512
DIN Abrasion Resistance 10N	(mm^3)	80	AS1683.21
DIN Abrasion Resistance 5N	(mm^3)	28	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 ETX65D** 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 **Erapol ETX65D**, the MOCA must first be melted at 110 - 120°C and Ethacure 300 at 25°C prior to mixing. After adding the curative, mix thoroughly, being careful not to introduce air into the mixture.

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

NOTE: If post cure temperature is less than 80 - 100°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 ETX65D 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.