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AUSTRALIA
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Erapol L-E93A

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol L-E93A is a liquid isocyanate terminated pre-polymer based on PTMEG polyol.

Polymers made from **Erapol L-E93A** exhibit outstanding abrasion resistance, high load bearing capability, low heat build-up and excellent low temperature flexibility.

Moreover, **Erapol L-E93A** has a lower free TDI content compared to conventional grades.

Application

Typical used for this polymer include forklift and caster wheels, screens, cyclones etc.

Product Specification

% NCO	5.00 ± 0.20
Specific Gravity at 25°C	1.05
Viscosity at 80°C (cps)	500 - 900
Colour	Clear, light amber

Mixing and Curing Conditions

		L-E93A / MOCA	L-E93A / Ethacure 300	L-E93A / Eracure 110
Erapol L-E93A	(pph)	100	100	100
MOCA Level	(pph)	15.0	-	-
Ethacure 300 Level	(pph)	-	12.1	-
Eracure 110 Level	(pph)	-	-	12.9
Recommended % Theory		95	95	95
Erapol Temperature	(°C)	75 - 85	65 - 75	65 - 75
Curative Temperature	(°C)	110 - 120	20 - 30	20 - 30
Pot Life	(mins)	8	8	8
Demould Time at 100°C	(hrs)	1	1	1
Post Cure Time at 100°C	(hrs)	16	16	16

Physical Properties

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

		L-E93A / MOCA	L-E93A / E300*	L-E93A / E110**	TEST METHOD
Hardness	(Shore A)	93 ± 3	93 ± 3	89 ± 3	AS1683.15
Tensile Strength	MPa (psi)	43.0 (6237)	40.0 (5802)	34.0 (4931)	AS1683.11
100% Modulus	MPa (psi)	11.0 (1595)	7.6 (1102)	10.0 (1450)	AS1683.11
200% Modulus	MPa (psi)	12.5 (1813)	11.4 (1653)	14.0 (2031)	AS1683.11
300% Modulus	MPa (psi)	17.9 (2596)	15.5 (2248)	19.0 (2756)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	86	85	99	AS1683.12
Trouser Tear Strength	(kN/m)	39	39	35	AS1683.12
Elongation	(%)	420	420	379	AS1683.11
DIN Resilience	(%)	50	50	54	DIN53512
DIN Abrasion Resistance 10N	(mm^3)	60	62	27	AS1683.21
DIN Abrasion Resistance 5N	(mm^3)	22	22	17	AS1683.21
Compression Set / 22 hr at 70°C	(%)	28	40	33	AS1683.13
Cured Specific Gravity	(g/cm^3)	1.10	1.10	1.10	AS1683.4

Please note * Ethacure 300
** Eracure 110

Processing Procedure

1. **Erapol L-E93A** should be heated to 80 ± 5°C and thoroughly degassed at -95kpa of vacuum until excessive foaming stops.

2. The curative should be added to **L-E93A**, the MOCA must first be melted at 110 - 120°C prior to mixing and Ethacure 300/Eracure 110 processed at room temperature. After adding the curative, mix thoroughly, being careful not to introduce air into the mixture.

3. Pour mixed materials into moulds that have been preheated to 80 - 100°C and pre-coated with release agent.

NOTE: If a longer pot life is required, then **L-E93A** should be used at 70 - 75°C, MOCA at 110 - 120°C or Ethacure 300/Eracure 110 at room temperature. Post cure temperature should be increased to 100 - 110°C to avoid glassiness in the final polymer. Shrinkage will also be minimised if the above conditions are used.

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 L-E93A 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.