Era Polymers Pty. Ltd.
2-4 Green Street, Banksmeadow
Sydney, NSW 2019
AUSTRALIA
www.erapol.com.au

Erapol XLE93A

POLYETHER (PTMEG) TDI PREPOLYMER – LOW FREE TDI CONTENT

TECHNICAL DATASHEET

Erapol XLE93A is a new generation of liquid isocyanate terminated prepolymer based on 100% PTMEG polyether polyol with the added benefit of extremely low free isocyanate.

Polymers made from **Erapol XLE93A** exhibit outstanding abrasion, impact and chemical resistance, along with high load bearing capacity and low heat build-up in dynamic applications.

Additionally, **Erapol XLE93A** has a low free TDI content (less than 0.1%) - low viscosity and long pot life make processing easy.

Application

Typical uses of this polymer include forklift truck tyres, roles and gears, die pads etc.

Product Specification

% NCO	5.20 ± 0.20
Specific Gravity at 70°C (g/cm^3)	1.05
Viscosity at 80°C (cps)	250 – 550
Colour	Clear, light amber

Mixing and Curing Conditions

		XLE93A / MOCA	XLE93A / Ethacure 300
Erapol XLE93A	(pph)	100	100
MOCA Level	(pph)	15.7	-
Ethacure 300 Level	(pph)	-	12.6
Recommended % Theory		95	95
Erapol Temperature	(°C)	75 – 85	75 – 80
Curative Temperature	(°C)	110 – 120	20 - 30
Pot Life	(mins)	12	6
Demould Time at 100°C	(mins)	30	20
Post Cure Time at 100°C	(hrs)	16	16

Physical Properties

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

		XLE93A / MOCA	XLE93A / E300*	TEST METHOD
Hardness	(Shore A)	93 ± 3	93 ± 3	AS1683.15
Tensile Strength	MPa (psi)	42 (6092)	36.8 (5337)	AS1683.11
100% Modulus	MPa (psi)	11 (1595)	12.2 (1769)	AS1683.11
200% Modulus	MPa (psi)	18 (2610)	17.8 (2582)	AS1683.11
300% Modulus	MPa (psi)	28 (4061)	25.9 (3756)	AS1683.11
Elongation	(%)	410	414	AS1683.11
Angle Tear Strength, Die C	kN/m (pli)	72 (411)	85.3 (487)	AS1683.12
Trouser Tear Strength	kN/m (pli)	24.5 (140)	-	AS1683.12
DIN Resilience	(%)	50	49	DIN 53512
DIN Abrasion Resistance 10N	(mm^3)	56	62	AS1683.21
Compression Set / 22 hr at 70°C	(%)	25	33	AS1683.13
Cured Specific Gravity	(g/cm^3)	1.11	1.10	AS1683.4

*Ethacure 300

Processing Procedure

1. **Erapol XLE93A** should be heated to 80 ± 5°C and thoroughly degassed at -95 kpa of vacuum until excessive foaming stops.
2. The curative should be added to **XLE93A**, the MOCA must first be melted at 110 – 120°C and Ethacure 300 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, which have been pre-heated to 100°C and pre-coated with release agent.

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 XLE93A 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.