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Sydney, NSW 2019
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Erapol EHP83A

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol EHP83A is a high technology product based on new generation polyols. When cured with MOCA it produces an **83 Shore A** elastomer. The polyurethane elastomer exhibits superior mechanical properties, exceeding the performance of traditional polyester and polyether polyurethanes.

Polymers made from **Erapol EHP83A** exhibit outstanding abrasion resistance, high load bearing capability, low heat build-up and excellent low temperature flexibility.

Application

Typical uses for this polymer include caster and forklift wheels, screens, cyclones and many other end use applications.

Product Specification

% NCO	3.60 ± 0.25
Specific Gravity @ 25°C	1.05
Viscosity @ 80°C (cps)	700 - 1100
Colour	Clear, light amber

Mixing and Curing Conditions

		EHP83A / MOCA	EHP83A / Ethacure 300	EHP83A / Eracure 110
Erapol EHP83A	(pph)	100	100	100
MOCA Level	(pph)	10.9	-	-
Ethacure 300 Level	(pph)	-	9.2	-
Eracure 110 Level	(pph)	-	-	9.3
Recommended % Theory		95	100	95
Erapol Temperature	(°C)	75 - 85	65 - 75	65 - 75
Curative Temperature	(°C)	100 - 110	20 - 30	20-30
Pot Life	(mins)	10	8	8 - 10
Demould Time @ 100°C	(hrs)	2	2	3 - 4
Post Cure Time @ 100°C	(hrs)	16	16	16



This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.

Physical Properties

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

		EHP83A/MOCA	EHP83A/E300*	EHP83A/E110**	TEST METHOD
Hardness	(Shore A)	83 ± 3	83 ± 3	80 ± 3	AS1683.15
Tensile Strength	MPa (psi)	39.0 (5656)	38.0 (5511)	34.0 (4931)	AS1683.11
100% Modulus	MPa (psi)	5.1 (740)	-	5.3 (769)	AS1683.11
200% Modulus	MPa (psi)	-	-	7.8 (1131)	AS1683.11
300% Modulus	MPa (psi)	9.0 (1305)	-	14.7 (2132)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	77	83	70	AS1683.12
Trouser Tear Strength	(kN/m)	-	-	25	AS1683.12
Elongation	(%)	600	660	560	AS1683.11
DIN Resilience	(%)	60	56	62	DIN53512
DIN Abrasion Resistance 10N	(mm ³)	45	55	27	AS1683.21
DIN Abrasion Resistance 5N	(mm ³)	16	18	13	AS1683.21
Compression Set / 22 hr @ 70°C	(%)	25	-	-	AS1683.13
Cured Specific Gravity	(g/cm ³)	1.12	1.12	1.12	AS1683.4

Please note * Ethacure 300

** Eracure 110

Processing Procedure

- Erapol EHP83A** should be heated to the recommended processing temperature and thoroughly degassed at -95 kPa of vacuum until excessive foaming stops.
- The curative should be added to **EHP83A**, the MOCA must first be melted at 110 - 120°C prior to mixing and the Ethacure 300/Eracure 110 processed at room temperature. After adding the curative, mix thoroughly, being careful not to introduce air into the mixture.
- Pour the mixed materials into moulds which have been preheated to 80 - 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 recommendation to improve adhesion.

Handling Precautions

Erapol EHP83A 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.