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Sydney, NSW 2019
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Erapol EHP90A

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol EHP90A is a liquid isocyanate terminated pre-polymer. When cured with MOCA it produces a **90 Shore A** elastomer. The polyurethane elastomer exhibits superior mechanical properties.

Polymers made from **Erapol EHP90A** exhibit outstanding abrasion, impact, and chemical resistance along with high load bearing capacity.

Application

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

Product Specification

% NCO	4.60 ± 0.25
Specific Gravity @ 25°C	1.06
Viscosity @ 80°C (cps)	500 - 900
Colour	Clear, light amber

Mixing and Curing Conditions

		EHP90A / MOCA	EHP90A / Ethacure 300	EHP90A / Eracure 110
Erapol EHP90A	(pph)	100	100	100
MOCA Level	(pph)	14.0	-	-
Ethacure 300 Level	(pph)	-	11.1	-
Eracure 110 Level	(pph)	-	-	11.9
Recommended % Theory		95	95	95
Erapol Temperature	(°C)	75 - 85	65 - 75	65 - 75
Curative Temperature	(°C)	110 - 120	25	25
Pot Life	(mins)	8	7	10
Demould Time @ 100°C	(hrs)	1	2	60
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.

		EHP90A/MOCA	EHP90A/E300*	EHP90A/E110**	TEST METHOD
Hardness	(Shore A)	90 ± 3	90 ± 3	90 ± 3	AS1683.15
Tensile Strength	MPa (psi)	40.0 (5802)	39.0 (5656)	34.0 (4931)	AS1683.11
100% Modulus	MPa (psi)	7.2 (1044)	-	9.0 (1305)	AS1683.11
200% Modulus	MPa (psi)	10.9 (1581)	-	13.4 (1944)	AS1683.11
300% Modulus	MPa (psi)	15.1 (2190)	-	18.6 (2698)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	80	102	98	AS1683.12
Trouser Tear Strength	(kN/m)	41	-	30	AS1683.12
Elongation	(%)	500	500	580	AS1683.11
DIN Resilience	(%)	52	48	50	DIN53512
DIN Abrasion Resistance 10N	(mm ³)	37	46	27	AS1683.21
DIN Abrasion Resistance 5N	(mm ³)	12	15	10	AS1683.21
Compression Set / 22 hr @ 70°C	(%)	24	-	-	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 EHP90A** should be heated to the recommended processing temperature and thoroughly degassed at -95 kPa of vacuum until excessive foaming stops.
2. The curative should be added to **EHP90A**, 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.
3. 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 recommendations to improve adhesion.

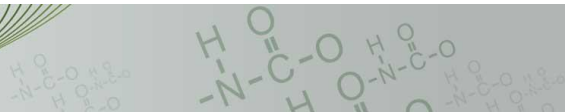
Handling Precautions

Erapol EHP90A contains small amounts of free TDI. Therefore the product should be used in well-ventilated areas. Avoid breathing 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 the exposed person to fresh air. Call a physician.

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