



Era Polymers Pty. Ltd.
25-27 Green Street, Banksmeadow
Sydney, NSW 2019
AUSTRALIA
www.erapol.com.au

Erapol L-E90A

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol L-E90A is a liquid isocyanate terminated pre-polymer based on PTMEG polyether polyol.

Polymers made from **Erapol L-E90A** exhibit outstanding abrasion, impact and chemical resistance, along with high load bearing capacity.

Moreover, **Erapol L-E90A** has a lower free TDI content compared to conventional grades.

Application

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

Product Specification

% NCO	4.20 ± 0.20
Specific Gravity at 77°F (25°C)	1.06
Viscosity at 176°F (80°C) (cps)	800 - 1300
Colour	Clear, light amber

Mixing and Curing Conditions

		L-E90A / MOCA	L-E90A / E300*	L-E90A / E110**	L-E90A/ MCDEA
Erapol L-E90A	(pph)	100	100	100	100
MOCA Level	(pph)	12.5	-	-	-
Eracure 300 Level	(pph)	-	10.2	-	-
Eracure 110 Level	(pph)	-	-	10.9	-
Lonzacure MCDEA Level	(pph)				18.0
Recommended % Theory		95	95	95	95
Erapol Temperature	°F (°C)	167-185 (75-85)	149-167 (65-75)	149-167 (65-75)	167-185 (75-85)
Curative Temperature	°F (°C)	30-248 (110-120)	68-86 (20-30)	68-86 (20-30)	94-212 (90-100)
Pot Life	(mins)	10	10	10 - 14	3 - 5
Demould Time at 212°F (100°C)	(mins)	60	60	60	30 - 40
Post Cure Time at 212°F (100°C)	(hrs)	16	16	16	16

*Eracure 300; **Eracure 110



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.

		L-E90A / MOCA	L-E90A / Eracure 300
Hardness	(Shore A)	90	90
Tensile Strength	psi (MPa)	6382 (44)	5511 (38)
100% Modulus	psi (MPa)	1436 (9.9)	1160 (8)
300% Modulus	psi (MPa)	2640 (18.2)	2263 (15.6)
Elongation	(%)	440	440
Angle Tear Strength, Die C	pli (kN/m)	514 (90)	445 (78)
Split Tear Strength	pli (kN/m)	222.5 (39)	211 (37)
DIN Resilience	(%)	56	51
DIN Abrasion Resistance 10N	(mm ³)	53	64
Compression Set / 22hrs at 158°F	(%)	29	45
Cured Specific Gravity	(g/cm ³)	1.10	1.10

Processing Procedure

1. **Erapol L-E90A** should be heated to 167-185°F (80 ± 5°C) and thoroughly degassed at -95kpa of vacuum until excessive foaming stops.
2. The curative should be added to **L-E90A**, the MOCA must first be melted at 230-248°F (110 - 120°C) and the Lonzacure MCDEA at 194-212°F (90 – 100°C) prior to mixing and the Eracure 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, which have been preheated to 176-212°F (80 - 100°C) and pre-coated with release agent.

Adhesion

Adhesion of Erapol based elastomers to various substrates it at best marginal if a primer is not used. Please consult Era Polymers for specific recommendations to improve adhesion.

Handling Precautions

Erapol L-E90A 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.