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## Erapol L-E75D

POLYETHER (PTMEG) TDI PREPOLYMER

### TECHNICAL DATASHEET

**Erapol L-E75D** is a liquid isocyanate terminated prepolymer based on the high performance PTMEG polyether polyol. When reacted with MOCA the product produces a polyether elastomer with a hardness of 75 Shore D, and has been designed to have a long pot life.

Polymers made from **Erapol L-E75D** exhibit high impact strength coupled with outstanding abrasion and chemical resistance as well as high load bearing capacity.

Additionally, **Erapol L-E75D** is a lower free TDI prepolymer.

### Application

Successful applications include rigid wear parts for mining and industrial use, drive pulleys, pads, hydrocyclone parts, feed and distributor boxes, gears etc.

### Product Specification

% NCO	9.20 ± 0.20
Specific Gravity at 25°C (77°F)	1.10
Viscosity at 80°C (176°F) (cPs)	500 – 700
Color	Clear, pale amber

### Mixing and Curing Conditions

		L-E75D / MOCA	L-E75D / Eracure 300	L-E75D / Eracure 110
Erapol L-E75D	(pph)	100	100	100
Curative Level	(pph)	26.3	21.1	22.5
Recommended % Theory		90	90	90
Erapol Temperature	°F (°C)	140 – 158 (60 – 70)	140 – 158 (60 – 70)	140 – 158 (60 – 70)
Curative Temperature	°F (°C)	230 (110)	68 - 86 (20 - 30)	68 - 86 (20 - 30)
Pot Life	(mins)	4 - 6	3.5 – 5.5	3.5 – 5.5
Mold Temperature	°F (°C)	212 (100)	212 (100)	212 (100)
Demold Time at 100°C (212°F)	(mins)	15 - 20	10 - 15	10 - 15
Post Cure Time at 100°C (212°F)	(hrs)	16	16	16



This information is of general nature and is supplied without recommendation or 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-E75D/MOCA	L-E75D/E300*	L-E75D/E110**	TEST METHOD
Hardness	(Shore D)	75	73	73	ASTM D2240
Tensile Strength	psi (MPa)	7832 (54)	6802 (46.9)	(51.5)	ASTM D412
100% Modulus	psi (MPa)	5947 (41)	4917 (33.9)	(36.2)	ASTM D412
Elongation	(%)	185	215	210	ASTM D412
Angle Tear Strength, Die C	pli (kN/m)	1188 (208)	1140 (200)	(181)	ASTM D624
Split Tear Strength	pli (kN/m)	114 (20)	131 (23)	(22)	ASTM D470-05
DIN Resilience	(%)	53	52	55	DIN 53512
DIN Abrasion Resistance 10N	(mm <sup>3</sup> )	133	108	90	ASTM D5963
Compression Set / 22 hr at 158°F	(%)	50	-	69	ASTM D395, B
Izod Impact	(kJ/m <sup>2</sup> )	73 (NB)	55 (NB)	-	ASTM D4812
Cured Density	(g/cm <sup>3</sup> )	1.19	1.16	1.16	ASTM D1817

\*Eracure 300 \*\*Eracure 110

## Processing Procedure

1. **Erapol L-E75D** should be heated to 140 - 158°F and thoroughly degassed at -95 kPa of vacuum until excessive foaming stops. Containers should be unlined metal or plastic and large enough to allow for foaming during degassing.
2. The curative should be added to **Erapol L-E75D**. MOCA must be melted at 230°F prior to mixing; Eracure 300 and Eracure 110 are processed at room temperature. After adding curative, mix thoroughly and degas at -95 kPa for 1.5 minutes.
3. Pour the mixed materials into molds, which have been pre-heated into molds at 230°F and coated with release agent.

**NOTE:** If post cure temperature is less than 212°F, the polymer may have a glassiness/brittle appearance.

## 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-E75D** contains small amounts of free TDI. Therefore, the product should be used in well-ventilated areas. Avoid breathing in vapors 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 vapors, remove exposed person to fresh air. Call a physician.