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Erapol L-E65D

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol L-E65D is a high performance liquid isocyanate terminated prepolymer based on PTMEG polyether polyol.

Polymers made from **Erapol L-E65D** exhibit high impact strength coupled with excellent abrasion, hydrolysis resistance and chemical resistance as well as high load bearing capacity.

Additionally, **Erapol L-E65D** is a low free TDI version of Erapol ET65D.

Application

Typical uses for this polymer include forklift truck tyres, rolls, gears etc.

Product Specification

% NCO	8.30 ± 0.20
Specific Gravity at 25°C	1.11
Viscosity at 80°C (cps)	300 - 700
Colour	Clear, light amber

Mixing and Curing Conditions

		L-E65D / MOCA	L-E65D / Ethacure 300
Erapol L-E65D	(pph)	100	100
MOCA Level	(pph)	25.4	-
Ethacure 300 Level	(pph)	-	20.4
Recommended % Theory		95	95
Erapol Temperature	(°C)	60 - 65	55 - 65
Curative Temperature	(°C)	110	20 - 30
Pot Life	(mins)	4 - 6	5 - 7
Demould Time at 110°C	(mins)	30	30
Post Cure Time at 110°C	(hrs)	16	16



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Physical Properties

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

		L-E65D / MOCA	L-E65D / Ethacure 300	TEST METHOD
Hardness	(Shore D)	65 ± 3	65 ± 3	AS1683.15
Tensile Strength	MPa (psi)	54 (7832)	52 (7542)	AS1683.11
100% Modulus	MPa (psi)	25.0 (3626)	27.5 (3989)	AS1683.11
200% Modulus	MPa (psi)	37.9 (5497)	39.3 (5700)	AS1683.11
Angle Tear Strength, Die C	(kN/m)	139	135	AS1683.12
Trouser Tear Strength	(kN/m)	58	60	AS1683.12
Elongation	(%)	350	290	AS1683.11
DIN Resilience	(%)	46	42	DIN 53512
DIN Abrasion Resistance 10N	(mm ³)	69	74	AS1683.21
Cured Specific Gravity	(g/cm ³)	1.161	1.152	AS1683.4

Processing Procedure

1. **Erapol L-E65D** should be heated to 65 ± 5°C 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. When adding MOCA to **Erapol L-E65D**, the MOCA must be melted at 110-120°C prior to mixing and Ethacure 300 processed at room temperature. After adding curative, mix thoroughly and degas at -95 kpa for 1.5 minutes.
3. Pour the mixed materials into moulds, which have been pre-heated into moulds at 80 - 100°C and coated with release agent.

NOTE: If post cure temperature is less than 100°C, 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-E65D 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.