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Erapol XLE95A

POLYETHER (PTMEG) TDI PREPOLYMER – LOW FREE TDI CONTENT

TECHNICAL DATASHEET

Erapol XLE95A is a new generation of liquid isocyanate terminated prepolymer based on 100% PTMEG polyether polyol with the added benefit of extremely low free isocyanate.

Polymers made from **Erapol XLE95A** exhibit outstanding abrasion, impact and chemical resistance, along with high load bearing capacity and low heat build-up in dynamic applications.

Additionally, **Erapol XLE95A** has a low free TDI content (less than 0.1%) - low viscosity and long pot life make processing easy.

Application

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

Product Specification

% NCO	6.00 ± 0.20
Specific Gravity at 77°F (25°C)	1.07
Viscosity at 176°F (80°C) (cps)	300 – 600
Color	Clear, light amber

Mixing and Curing Conditions

		XLE95A / MOCA	XLE95A / Ethacure 300
Erapol XLE95A	(pph)	100	100
MOCA Level	(pph)	18.1	-
Ethacure 300 Level	(pph)	-	14.5
Recommended % Theory		95	95
Erapol Temperature	°F (°C)	167 – 185 (75 – 85)	167 – 176 (75 – 80)
Curative Temperature	°F (°C)	230 – 248 (110 – 120)	68 – 86 (20 – 30)
Pot Life	(mins)	8	5 - 6
Demould Time at 212°F (100°C)	(mins)	25	15
Post Cure Time at 212°F (100°C)	(hrs)	16	16

Note: pph MOCA and Ethacure 300 are 95% theory based on midpoint NCO.

Physical Properties

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

		XLE95A / MOCA	XLE95A / E300*	TEST METHOD
Hardness	(Shore A)	95	95	ASTM D2240
Tensile Strength	psi (MPa)	6382 (44)	5801 (40)	ASTM D412
100% Modulus	psi (MPa)	2074 (14.3)	2016 (13.9)	ASTM D412
200% Modulus	psi (MPa)	3278 (22.6)	2872 (19.8)	ASTM D412
300% Modulus	psi (MPa)	5221 (36.0)	4438 (30.6)	ASTM D412
Elongation	(%)	315	350	ASTM D412
Angle Tear, Die C	pli (kN/m)	501 (87.8)	502 (88.0)	ASTM D624
Split Tear	pli (kN/m)	117(20.5)	132 (23.2)	ASTM D470-05
Bashore Rebound	(%)	41	44	ASTM D2632
DIN Abrasion Resistance 10N	(mm^3)	58	63	ASTM D5963
Compression Set / 22 hr at 70°C	(%)	19	27	ASTM D395, B
Cured Specific Gravity	(g/cm^3)	1.12	1.11	ASTM D1817

*Ethacure 300

Processing Procedure

1. **Erapol XLE95A** 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 **XLE95A,** the MOCA must first be melted at 230 – 248°F (110 – 120°C) and Ethacure 300 processed at room temperature. After adding the curative, mix thoroughly being careful not to introduce air into the mixture.

3. Pour mixed materials into molds, which have been preheated to 212°F (100°C) and pre-coated with release agent.

Handling Precautions

Erapol XLE95A 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.