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Erapol ETL85A

POLYETHER (PPG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol ETL85A is a liquid isocyanate terminated prepolymer based on PPG polyols.

Having a PPG backbone means that this prepolymer can be used for more general-purpose applications, compared to prepolymers made from PTMEG.

Additionally, **Erapol ETL85A** can be blended with premium grade compounds to produce formulations of intermediate performance.

Application

Generally used in applications where the outstanding properties of PTMEG based materials are not needed.

Product Specification

NCO Content (%)	4.20 ± 0.20
Specific Gravity at 77°F	1.07
Viscosity at 176°F (cPs)	300 - 700
Colour	Amber

Mixing and Curing Conditions

		ETL85A / MOCA	ETL85A / Eracure 300
Erapol ETL85A	(pph)	100	100
MOCA Level	(pph)	12.7	-
Eracure 300 Level	(pph)	-	10.2
Recommended % Theory		95	95
Erapol Temperature	°F (°C)	167 - 185 (75 - 85)	140 - 158 (60 - 70)
Curative Temperature	°F (°C)	230 - 248 (110 - 120)	68 - 86 (20 - 30)
Pot Life	(mins)	10	8
Demould Time at 212°F	(hrs)	1	1
Post Cure Time at 212°F	(hrs)	16	16

Physical Properties

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

		ETL85A / MOCA	ETL85A / Eracure 300	TEST METHOD
Hardness	(Shore A)	85 ± 3	85 ± 3	ASTM D2240
Tensile Strength	psi (MPa)	4061 (28)	3481 (24)	ASTM D412
100% Modulus	psi (MPa)	769 (5.3)	595 (4.1)	ASTM D412
300% Modulus	psi (MPa)	1595 (11.0)	1247 (8.6)	ASTM D412
Elongation	(%)	545	525	ASTM D412
Angle Tear Strength, Die C	pli (kN/m)	400 (70)	400 (70)	ASTM D624
DIN Resilience	(%)	30	35	DIN53512
DIN Abrasion Resistance 10N	(mm^3)	140	143	ASTM D5963
Compression Set / 22 hr at 158°F	(%)	45	50	ASTM D395, B
Cured Density	(g/cm^3)	1.11	1.10	ASTM D1817

Processing Procedure

1. **Erapol ETL85A** should be heated to the recommended processing temperature and thoroughly degassed at -95kPa of vacuum until excessive foaming stops.

2. The curative should be added to **ETL85A**, the MOCA must first be melted at 230 - 248°F prior to mixing and Eracure 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 moulds that have been preheated to 176 - 212°F 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 ETL85A 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.