



Era Polymers Pty. Ltd.
2-4 Green Street, Banksmeadow
Sydney, NSW 2019
AUSTRALIA
www.erapol.com.au

Erapol ET70D

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol ET70D is a liquid isocyanate terminated prepolymer based on PTMEG polyether polyol.

Polymers made from **Erapol ET70D** exhibit high impact strength coupled with excellent abrasion and chemical resistance as well as high load bearing capacity.

Application

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

Product Specification

% NCO	9.20 ± 0.20
Specific Gravity at 77°F (25°C)	1.13
Viscosity at 176°F (80°C) (cps)	300 – 700
Color	Clear, light amber

Mixing and Curing Conditions

		ET70D / MOCA	ET70D / Eracure 300
Erapol ET70D	(pph)	100	100
MOCA Level	(pph)	24.9	-
Eracure 300 Level	(pph)	-	19.9
Recommended % Theory		85	85
Erapol Temperature	°F (°C)	140 – 158 (60 – 70)	131 – 149 (55 – 65)
Curative Temperature	°F (°C)	230 – 248 (110 – 120)	68 – 86 (20 – 30)
Pot Life	(mins)	1	1
Demold Time at 212°F (100°C)	(mins)	45	45
Post Cure Time at 212°F (100°C)	(hrs)	16	16

Note: pph Curative is 90% theory based on midpoint %NCO.



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.

		ET70D / MOCA	ET70D / Eracure 300	TEST METHOD
Hardness	(Shore D)	73 ± 3	70 ± 3	ASTM D2240
Tensile Strength	psi (MPa)	7542 (52.0)	7818 (53.9)	ASTM D412
100% Modulus	psi (MPa)	5004 (34.5)	3873 (26.7)	ASTM D412
300% Modulus	psi (MPa)	-	7237 (49.9)	ASTM D412
Elongation	(%)	210	310	ASTM D412
Angle Tear Strength, Die C	pli (kN/m)	1102 (193)	1188 (208)	ASTM D624
DIN Resilience	(%)	54	51	DIN 53512
DIN Abrasion Resistance 10N	(mm ³)	105	82	ASTM D5963
Compression Set / 22hrs at 158°F	(%)	50	-	ASTM D395, B
Cured Specific Gravity	(g/cm ³)	1.13	1.13	ASTM D1817
Impact Strength	(ft.lb/in)	1.2	-	-

Processing Procedure

1. **Erapol ET70D** should be heated to the recommended processing temperature and thoroughly degassed at -95kpa of vacuum until excessive foaming stops.
2. MOCA should be added to **ET70D**, the MOCA must first be melted at 230–248°F (110–120°C) prior to mixing and Eracure 300 processed at room temperature. After adding MOCA, mix thoroughly being careful not to introduce air into the mixture.
3. Pour mixed materials into molds that have been preheated to 212–230°F (100–110°C) and pre-coated with release agent

NOTE: If curing temperature is less than 212–230°F (100–110°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 ET70D 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.



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.