



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

Erapol ETX80D

POLYETHER (PTMEG) TDI PREPOLYMER

TECHNICAL DATASHEET

Erapol ETX80D is a liquid isocyanate terminated pre-polymer based on the high performance PTMEG polyether polyol. When reacted with MOCA, the product produces a polyether elastomer with a hardness of 80 Shore D. This product has been designed to have a long pot life.

Polymers made from **Erapol ETX80D** exhibit high impact strength coupled with outstanding abrasion and chemical resistance as well as high load bearing capacity.

Application

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

Product Specification

% NCO	9.50 ± 0.30
Specific Gravity at 25°C	1.10
Viscosity at 80°C (cps)	300 – 800
Colour	Clear, pale amber

Mixing and Curing Conditions

		ETX80D / MOCA	ETX80D / Ethacure 300
Erapol ETX80D	(pph)	100	100
MOCA Level	(pph)	26.0	–
Ethacure 300 level	(pph)	–	21.0
Recommended % Theory		85	85
Erapol Temperature	(°C)	60 – 65	55 – 65
Curative Temperature	(°C)	110 – 120	20 – 30
Pot Life	(mins)	2 – 3	2 – 3
Demould Time at 110°C	(hrs)	< 1	< 1
Post Cure Time at 110°C	(hrs)	20 – 24	20 – 24

All results are based on 200 grams of **Erapol ETX80D** at 65°C.



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.

Physical Properties

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

		ETX80D / MOCA	ETX80D / E300*	TEST METHOD
Hardness	(Shore D)	78 ± 3	75 ± 3	AS1683.15
Tensile Strength	MPa (psi)	55.0 (7977)	46.4 (6730)	AS1683.11
100% Modulus	MPa (psi)	38.0 (5511)	41.9 (6077)	AS1683.11
Elongation	(%)	220	145	AS1683.11
Angle Tear Strength, Die C	(kN/m)	170	163	AS1683.12
DIN Resilience	(%)	–	51	DIN 53512
DIN Abrasion Resistance 10N	(mm ³)	125	121	AS1683.21
DIN Abrasion Resistance 5N	(mm ³)	40	39	AS1683.21
Compression Set / 22 hr at 70°C	(%)	72	66	AS1683.13
Cured Specific Gravity	(g/cm ³)	1.13	1.17	AS1683.4
Flexural Strength	(MPa)	22.4	17.2	AS2132
Flexural Modulus	(MPa)	854	718	AS2132
Izod Impact Strength, unnotched	(kJ/m ²)	59	49	AS1146.1

*Ethacure 300

Processing Procedure

1. **Erapol ETX80D** 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 **ETX80D**, the MOCA must first be melted at 110 – 120°C and Ethacure 300 at 25°C prior to mixing. After adding the curative, mix thoroughly, being careful not to introduce air into the mixture.
3. Pour mixed materials into moulds, which have been preheated to 100 – 110°C and pre-coated with release agent.

NOTE: If post cure temperature is less than 100°C, the polymer may have a glassiness/brittle appearance. The post cure time should be adhered.

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.



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.

Handling Precautions

Erapol ETX80D 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.