



**Era Polymers Pty. Ltd.**  
25-27 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 for this polymer include forklift truck tyres, rolls, gears etc.

#### Product Specification

<b>% NCO</b>	9.20 ± 0.25
<b>Specific Gravity @ 25°C</b>	1.13
<b>Viscosity @ 80°C (cps)</b>	300 - 700
<b>Colour</b>	Clear, light amber

#### Mixing and Curing Conditions

		<b>ET70D / MOCA</b>	<b>ET70D / Ethacure 300</b>
<b>Erapol ET70D</b>	(pph)	100	100
<b>MOCA Level</b>	(pph)	25.0	-
<b>Ethacure 300 Level</b>	(pph)	-	20.0
<b>Recommended % Theory</b>		85	85
<b>Erapol Temperature</b>	(°C)	60 - 65	55 - 65
<b>Curative Temperature</b>	(°C)	110 - 120	20 - 30
<b>Pot Life</b>	(mins)	1	1
<b>Demould Time @ 110°C</b>	(hrs)	< 1	1
<b>Post Cure Time @ 110°C</b>	(hrs)	16	16



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.

		ET70D / MOCA	ET70D / Ethacure 300	TEST METHOD
<b>Hardness</b>	(Shore D)	73 ± 3	70 ± 3	AS1683.15
<b>Tensile Strength</b>	MPa (psi)	52.0 (7542)	53.9 (7818)	AS1683.11
<b>100% Modulus</b>	MPa (psi)	34.5 (5004)	26.7 (3873)	AS1683.11
<b>200% Modulus</b>	MPa (psi)	44.1 (6396)	37.3 (5410)	AS1683.11
<b>300% Modulus</b>	MPa (psi)	45.0 (6527)	49.9 (7237)	AS1683.11
<b>Angle Tear Strength, Die C</b>	(kN/m)	193	208	AS1683.12
<b>Elongation</b>	(%)	210	310	AS1683.11
<b>DIN Resilience</b>	(%)	54	51	DIN53512
<b>DIN Abrasion Resistance 10N</b>	(mm <sup>3</sup> )	105	82	AS1683.21
<b>DIN Abrasion Resistance 5N</b>	(mm <sup>3</sup> )	34	35	AS1683.21
<b>Compression Set / 22 hr @ 70°C</b>	(%)	50	-	AS1683.13
<b>Cured Specific Gravity</b>	(g/cm <sup>3</sup> )	1.13	1.13	AS1683.4
<b>Linear Shrinkage</b>	(%)	1.2	-	-
<b>Impact Strength</b>	(ft.lb/in)	1.2	-	-

## Processing Procedure

1. **Erapol ET70D** should be heated to the recommended processing temperature and thoroughly degassed at 1 - 5 mm Hg of vacuum until excessive foaming stops.
2. MOCA should be added to **ET70D**, the MOCA must first be melted at 110 - 120°C prior to mixing and Ethacure 300 processed at room temperature. After adding MOCA, mix thoroughly being careful not to introduce air into the mixture.
3. Pour mixed materials into moulds that have been preheated to 100 - 110°C and pre-coated with release agent

**NOTE:** If curing temperature is less than 100 - 110° C the polymer may have a glassiness/brittle appearance.

## 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.

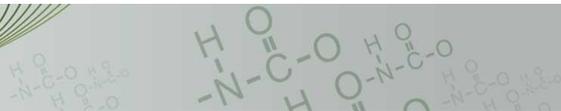
## Handling Precautions

**Erapol ET70D** 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 and 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.

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.



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.