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## Erapol EME90A

HIGH PERFORMANCE MDI POLYESTER  
ELASTOMER

### TECHNICAL DATASHEET

**Erapol EME90A** is high performance hot castable grade, MDI polyurethane elastomer based on polyester polyols and is generally semi-solid at ambient conditions. This product is an elastomer with outstanding toughness and abrasion properties, which is characteristic of MDI systems.

**Erapol EME90A** is normally cured with 1,4-butanediol to produce a 90 Shore A elastomer.

### Product Specification

% NCO	7.7 ± 0.2
Specific Gravity at 25°C	1.13
Viscosity at 80°C (cps)	950 - 1100
Colour	Milky, white translucent

### Mixing and Curing Conditions

		EME90A
Erapol EME90A	(pph)	100
1,4-Butanediol	(pph)	7.8
Erapol Temperature	(°C)	70 - 75
Curative Temperature	(°C)	25 - 30
Pot Life	(mins)	5 - 6
Demould Time at 110°C	(mins)	25 - 35
Post Cure Time at 110°C	(hrs)	16

Note: The potlife and demould time are measured on a mix of material in the laboratory of 200 – 300 grams.



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.

		EME90A	TEST METHOD
<b>Hardness</b>	(Shore A)	90 ± 3	AS1683.15
<b>Tensile Strength</b>	(MPa)	36	AS1683.11
<b>100% Modulus</b>	(MPa)	9	AS1683.11
<b>200% Modulus</b>	(MPa)	13	AS1683.11
<b>300% Modulus</b>	(MPa)	18	AS1683.11
<b>Angle Tear Strength, Die C</b>	(kN/m)	107	AS1683.12
<b>Trouser Tear Strength</b>	(kN/m)	65	AS1683.12
<b>Elongation</b>	(%)	550	AS1683.11
<b>DIN Resilience</b>	(%)	44	DIN 53512
<b>DIN Abrasion Resistance 10N</b>	(mm <sup>3</sup> )	33	AS1683.21
<b>Cured Specific Gravity</b>	(g/cm <sup>3</sup> )	1.24	AS1683.4

**Erapol EME90A** can be mixed by hand and can be machine dispensed also.

NOTE: Both **EME90A** and 1,4-butanediol components are moisture sensitive. Once opened, containers should be purged with nitrogen, if they are to be stored for a period of time.

Below 15°C Part A will appear as a white wax like substance. The **Erapol EME90A** can be melted overnight by placing the drum or pail in a fan forced hot box at 70-80°C. Care should be exercised in keeping moisture away from the **EME90A**. Do not exceed a temperature of 80°C when melting out the **EME90A**.

## Processing Procedure

1. Carefully weigh the correct amount of **Erapol EME90A** into a container and heat to 70-80°C and thoroughly degas under vacuum at -95 kpa.
2. Carefully weight correct proportion of **1,4-butanediol** into **EME90A** and mix thoroughly. Be careful not to entrap air whilst mixing. (If there are a lot of bubbles in the sample at this stage, the mixed material can be degassed again.)
3. Pour the mixed materials into moulds that have been preheated to 110°C and pre-coated with release agent, being careful to avoid trapping air.
4. Allow casting to cure before demoulding.

## 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 EME90A** should be used in well-ventilated area. Avoid breathing in vapours and protect skin and eyes from contact.

In case of skin contact 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.