



HIGH PERFORMANCE MDI POLYESTER
ELASTOMER

#### **TECHNICAL DATASHEET**

**Erapol EME95A** 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 EME95A can be cured with 1,4-butanediol (1,4-BDO) to produce a 95 Shore A elastomer.

#### **Product Specification**

% NCO	$9.0 \pm 0.2$
Specific Gravity at 77°F (25°C)	1.13
Viscosity at 176°F (80°C) (cps)	700 - 1000
Colour	Water clear

## **Mixing and Curing Conditions**

Erapol EME95A	(pbw)	100		
1,4-BDO	(pbw)	9.1		
Recommended % Theory		95		
Erapol EME95A Temperature	°F (°C)	167 - 185 (75 - 85)		
1,4-BDO Temperature	°F (°C)	77-86 (25 - 30)		
Pot Life at 176°F (80°C)	(mins)	4 - 7		
Mould Temperature	°F (°C)	230 (110)		
Oven Temperature	°F (°C)	230 (110)		
Demould Time at 230°F (110°C)	(mins)	15 - 20		
Post Cure Time at 230°F (110°C)	(hrs)	16		
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Results based on a 200g sample moulded in a rectangular slab. Demould time will depend on the size and shape of the cast part, the mould temperature and the curing temperature.







### **Physical Properties**

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

		EME95A	TEST METHOD
Hardness	(Shore A)	95	ASTM D2240
Tensile Strength	psi (MPa)	4496 (31)	ASTM D412
100% Modulus	psi (MPa)	1798 (12.4)	ASTM D412
300% Modulus	psi (MPa)	3176 (21.9)	ASTM D412
Elongation	(%)	465	AS1683.11
Angle Tear Strength, Die C	pli (kN/m)	666 (116.7)	ASTM D624
Trouser Tear Strength	pli (kN/m)	351 (61.5)	AS1683.12
DIN Resilience	(%)	21	DIN 53512
DIN Abrasion Resistance 10N	(mm³)	43	ASTM D5963
<b>Cured Specific Gravity</b>	(g/cm³)	1.25	ASTM D1817
Compression Set / 22 hr at 70°C	(%)	25	ASTM D395 – Method B

**Erapol EME95A** can be mixed by hand and can be machine dispensed also.

NOTE: Both **EME95A** and **1,4-BDO** components are moisture sensitive. Once opened, containers should be purged with nitrogen, if they are to be stored for a period of time.

Below 59°F (15°C) Part A will appear as a white wax like substance. The **Erapol EME95A** can be melted overnight by placing the drum or pail in a fan forced hot box at 158-176°F (70-80°C). Care should be exercised in keeping moisture away from **Erapol EME95A**.

Do not exceed a temperature of 176°F (80°C) when melting out the Erapol EME95A.

### **Processing Procedure**

- 1. Carefully weigh the correct amount of **Erapol EME95A** into a container and heat to 167 185°F (75 85°C) and thoroughly degas under vacuum at -95 kpa.
- 2. Carefully weight correct proportion of **1,4-BDO** into **EME95A** 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 230°F (110°C) and precoated with release agent, being careful to avoid trapping air.
- 4. Allow casting to cure before demoulding.

#### Adhesion

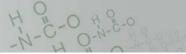
Adhesion of Erapol based elastomers to various substrates is at best marginal if a primer is not used. Please consult Era Polymers for specific recommendations to improve adhesion.



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Version 2 Date of Issue: 25 August 2014 Page 2 of 3





# **Handling Precautions**

**Erapol EME95A** 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.



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Version 2 Date of Issue: 25 August 2014 Page 3 of 3