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Erapol EMD86A

HIGH PERFORMANCE MDI BASED ELASTOMER

TECHNICAL DATASHEET

Erapol EMD86A is high performance MDI / PTMEG polyurethane elastomer system. It produces an elastomer with the outstanding toughness and abrasion properties characteristic of MDI / PTMEG systems.

Erapol EMD86A is normally cured with 1,4-Butane Diol (BDO) to produce an 85 Shore A elastomer. It has been formulated as a faster demould version of Erapol EMD85A.

Application

Erapol EMD86A has been specifically designed for applications requiring exceptional resilience and abrasion resistance.

Product Specification

% NCO	6.50 ± 0.25
Specific Gravity at 77°F	1.05
Viscosity at 176°F (cps)	1200 - 2000
Colour	Clear to cloudy

Mixing and Curing Conditions

		EMD86A / 1,4-BDO
Erapol EMD86A	(pph)	100
1,4-BDO Level	(pph)	6.6
Erapol EMD86A Temperature	°F (°C)	158 - 176 (70 - 80)
1,4-BDO Temperature	°F (°C)	77 - 86 (25 - 30)
Mixing Time	(mins)	1 - 2
Pot Life	(mins)	6 - 7
Demould Time at 230°F (110°C)	(hrs)	1
Post Cure Time at 230°F (110°C)	(hrs)	16



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Version 1.0

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Physical Properties

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

		EMD86A / 1,4-BDO	TEST METHOD
Hardness	(Shore A)	85 ± 3	ASTM D2240
Tensile Strength	psi (MPa)	4496 (31)	ASTM D412
100% Modulus	psi (MPa)	928 (6.4)	ASTM D412
200% Modulus	psi (MPa)	1479 (10.2)	ASTM D412
300% Modulus	psi (MPa)	2205 (15.2)	ASTM D412
Elongation	(%)	550	ASTM D412
Angle Tear Strength, Die C	pli (kN/m)	485 (85)	ASTM D624
DIN Resilience	(%)	69	DIN 53512
DIN Abrasion Resistance 10N	(mm ³)	48	ASTM D5963
Cured Specific Gravity	(g/cm ³)	1.10	ASTM D1817

NOTE: **Erapol EMD86A** is 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) **Erapol EMD86A** will appear as a white wax like substance. It can be melted overnight by placing the drum or pail in a fan forced hot box at 158 - 176°F (70 - 80°C). Do not exceed 176°F (80°C) when melting prepolymer.

Processing Procedure

1. Carefully weigh the correct amount of **Erapol EMD86A** into a container, heat to 158 - 176°F (70 - 80°C) and thoroughly degas under vacuum at -13.8psi (-95 kPa).
2. Carefully weight correct proportion of the 1,4-butane diol into the **Erapol EMD86A**, mix thoroughly. Be careful not to entrap air whilst mixing. If time permits the mixed material can be degassed again after mixing.
3. Pour the mixed materials into moulds that have been preheated to 230°F (110°C) and pre-coated with release agent.
4. Allow casting to cure before demoulding.

Erapol EMD86A is also suitable for machine processing.

Handling Precautions

Erapol EMD86A should be used in well-ventilated area. Avoid inhaling vapors 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 vapors, remove exposed person to fresh air. Call a physician.

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