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TECHNICAL DATA

Erapol RN83A

*HIGH PERFORMANCE POLYESTER BASED
POLYURETHANE*

ERAPOL RN83A is a polyester based urethane prepolymer. It has been formulated using a similar chemical backbone to Erapol RN3038, but gives a longer gel time than RN3038. It is intended for use with MOCA curative.

ERAPOL RN83A elastomers provide properties generally not available in rubbers, plastics or metals and have improved solvent and oil resistance and better thermal stability than most other general purpose rubbers and plastics. Other outstanding properties include high abrasion and tear resistance, excellent load-bearing capacity, toughness and resiliency.

PRODUCT SPECIFICATIONS

Colour	Clear, Light Amber
% NCO	3.05 – 3.35
Brookfield viscosity at 80C (cP)	1700 - 2300

MIXING AND CURING RECOMMENDATIONS

	RN83A / MOCA	RN83A / Ethacure 300	RN83A / Eracure 110
Mix ratio (RN83A / curative)	100 / 9.7	100 / 7.8	100 / 8.3
Recommended percent theory	95	95	95
Prepolymer temperature (°C)	80	65	65
Curative temperature (°C)	100 - 110	25 - 30	25 - 30
Potlife* (minutes)	8	6	6
Demould time at 100 °C (hours)	1	1	1
Post cure time at 100 °C (hours)	16	16	16

* Pot life based on a 200g sample, prepolymer at 80°C, MOCA at 100°C, Ethacure 300 and Eracure 110 at 25°C.

** Demould time based on a 200g rectangular slab. Demould time will depend on the size and shape of the cast part.

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.

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TYPICAL CURED PROPERTIES

Properties presented below are based on several determinations and are not intended for specification purposes.

	RN83A / MOCA	RN83A / Ethacure 300	RN83A / Eracure 110
Hardness (Shore A)	83 \pm 3	77 \pm 3	77 \pm 3
Tensile strength (MPa)	47	46	46
100% Modulus (MPa)	4.9	-	-
300% Modulus (MPa)	8.3	-	-
Elongation (%)	725	800	800
DIN resilience (%)	40	40	40
DIN abrasion resistance (mm³)	65	80	45
Angle tear strength (Die C, kN/m)	75	80	75
Trouser tear strength (Die C, kN/m)	40	35	35
Compression Set (22 hours @ 70°C)	25	-	-
Cured density (g/cm³)	1.26	1.25	1.25

RECOMMENDED PROCESSING PROCEDURE

1. Heat pre-weighed amounts of **ERAPOL RN83A** to the recommended temperature and degas at 1-5 mmHg of vacuum until excessive bubbling stops. Containers should be unlined metal, plastic or glass and should be large enough to allow for foaming during degassing.
2. MOCA must be melted at 110°C prior to mixing. Ethacure 300 and Eracure 110 can be used at room temperature. After adding curative, mix thoroughly and degas at 1-5 mmHg for 1 to 2 minutes.
3. Pour mixed system into moulds that have been coated with **Salease** mould release or equivalent and preheated to 100°C.
4. Allow the cast part to cure sufficiently before demoulding. Ensure cast parts are fully postcured to ensure maximum physical properties.

Automatic metering and mixing equipment can be used with all **ERAPOL RN83A** systems.

ADHESION

Adhesion of **Erapol** 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

Consult the **ERAPOL RN83A** material safety datasheet (MSDS) for specific hazard and handling information.

ERAPOL RN83A contains small amounts of free TDI. It should be used in well-ventilated areas. Avoid inhaling 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.

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If nose, throat or lungs become irritated from inhaling vapours, remove exposed person to fresh air.
Call a physician.

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