Era Polymers Pty. Ltd.
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TECHNICAL DATA
Erapol ECP72A
HIGH PERFORMANCE POLYURETHANE ELASTOMER SYSTEM

Erapol ECP72A is based on a high molecular weight polycaprolactone polyol. It produces an elastomer with excellent mechanical properties, similar to that of polyester pre-polymers, with the added advantage of superior hydrolysis resistance. When cured with MOCA, **Erapol ECP72A** produces a 72 Shore A elastomer. Polymers made from **Erapol ECP72A** exhibit outstanding abrasion resistance, high load bearing capability, low heat build-up and excellent low temperature flexibility.

PRODUCT SPECIFICATIONS

Colour	Clear to pale yellow
NCO (%)	3.30 ± 0.20
Viscosity at 80°C (cP)	1200 – 2000
Specific Gravity at 25°C	1.1

MIXING AND CURING RECOMMENDATIONS

	ECP72A / MOCA	**ECP72A/ E300**	**ECP72A/ E110**
Mix ratio (parts by weight, ECP72A / curative)	100 / 10	100/8	100/8.5
Recommended % theory	95	95	95
Erapol temperature (°C)	70 – 80	70 – 80	70 – 80
Curative temperature (°C)	110 – 120	25 – 30	25 – 30
Pot life at 80°C (minutes)	15	15 - 20	15 - 20
Demould time (100°C, hours)	2	2	2
Post cure (100°C, hours)	16	16	16

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

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TYPICAL CURED PROPERTIES

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

	ECP72A / MOCA	ECP72A/ E300	ECP72A/ E110
Hardness (Shore A)	71 ± 3	79 ± 3	79 ± 3
Tensile strength (MPa)	33	41	39
100% modulus (MPa)	2.3	5.7	5.2
200% modulus (MPa)	3.1	8.4	7.6
300% modulus (MPa)	3.9	12.8	11.2
Elongation (%)	620	540	600
Angle tear strength (kN/m)	70	80	72
Trouser tear strength (kN/m)	35	44	28
DIN resilience (%)	60	57	58
DIN abrasion loss (mm^3)	50	53	33
Compression Set (22 hours @ 70°C)	15	25	23
Cured Specific Gravity	1.15	1.15	1.15

PROCESSING PROCEDURE

1. **Erapol ECP72A** should be heated to 70-80°C and thoroughly degassed at l-5mm of vacuum until excessive foaming stops.

2. MOCA must be melted at 110 - 120°C prior to mixing; after adding the curative, mix thoroughly being careful not to entrap air in the mixture. The mixed material can be degassed after mixing if bubble-free cast parts are required.

3. Pour mixed **Erapol ECP72A /** MOCA into moulds that have been preheated to 100° C and pre-coated with release agent.

4. Allow the cast part to cure before demoulding, and ensure the part is post-cured as described above to ensure maximum physical properties are achieved.

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

Read and understand the product material safety data sheet (MSDS) before using this product.

Erapol ECP72A contains small amounts of free TDI. It should be used in well-ventilated areas. void inhaling vapours and protect skin and eyes from contact.

In case of skin contact, immediately remove excess, wash with soap and water. In case of eye contact, flush with water for at least 15 minutes.

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