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## Erapol CMD90A

COLD CAST POLYETHER / MDI POLYURETHANE

### TECHNICAL DATASHEET

**Erapol CMD90A** has been designed as a MDI polyether two-pack polyurethane system that will cure at room temperature. The composition of this elastomeric system produces a material with exceptional toughness, wear resistance, and tear strength. It has the added advantage of being MDI based and is therefore less toxic than traditional TDI based systems.

### Application

This material is well suited for dispensing through suitable polyurethane casting machines. **Erapol CMD90A** has been designed for linings for surfaces that require excellent wear resistance.

### Product Specification

	ISOCYANATE PREPOLYMER (A)	POLYOL CURATIVE (B)
% NCO	16.3 – 16.7	-
Specific Gravity at 25°C	1.10 – 1.16	0.99 – 1.05
Viscosity at 25°C (cps)	2000 - 2500	200 - 400
Appearance	White liquid	White liquid

### Mixing and Curing Conditions

Isocyanate Prepolymer (A)	(pbw)	100
Polyol Curative (B)	(pbw)	60
Recommended % Theory		98
Erapol Temperature	(°C)	25 – 40
Curative Temperature	(°C)	25 – 40
Pot Life at 25°C	(mins)	4 - 6
Demould Time at 60°C	(hours)	2
Cure at 60°C	(hours)	16

The above results are based on 320 gram hand mixed sample at 25°C.



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.

		CMD90A	TEST METHOD
<b>Hardness</b>	(Shore A)	90 ± 3	AS1683.15
<b>Tensile Strength</b>	(MPa)	24	AS1683.11
<b>100% Modulus</b>	(MPa)	8.7	AS1683.11
<b>200% Modulus</b>	(MPa)	11.4	AS1683.11
<b>300% Modulus</b>	(MPa)	15.7	AS1683.11
<b>Angle Tear Strength, Die C</b>	(kN/m)	117	AS1683.12
<b>Trouser Tear Strength</b>	(kN/m)	56	AS1683.12
<b>Elongation</b>	(%)	525	AS1683.11
<b>DIN Resilience</b>	(%)	43	DIN 53512
<b>DIN Abrasion Resistance 10N</b>	(mm <sup>3</sup> )	57	AS1683.21

## Processing Procedure

- Both Part A and Part B components are moisture sensitive. Once opened, containers should be purged with nitrogen, if they are to be stored for a period of time.
- Weigh the required amount of **Erapol CMD90A** Part A into a container and thoroughly degas at approximately -95kpa of vacuum until excessive foaming stops.
- Part B must first be mechanically stirred prior to processing or decanting. If semi-solid, warm to 20-30°C and stir until smooth. The Curative (Part B) should be added to the Part A. After adding the curative, mix thoroughly being careful not to introduce air into the mixture. If required degas mixed components at -95kpa of vacuum.
- Pour mixed **Erapol CMD90A** into moulds which have been precoated with release agent.
- Allow casting to cure at 25°C for the specified time 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 CMD90A** should be used in well-ventilated areas. Avoid breathing in vapours and protect skin and eyes from direct 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.

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