Era Polymers Pty. Ltd.
25-27 Green Street, Banksmeadow
Sydney, NSW 2019
AUSTRALIA
www.erapol.com.au

Erapol CMD78A

COLD CAST POLYETHER / MDI POLYURETHANE

TECHNICAL DATASHEET

Erapol CMD78A 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.

Application

This material is well suited for dispensing through suitable polyurethane casting machines.
Erapol CMD 78A 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	Clear / hazy liquid	White liquid

Mixing and Curing Conditions

Isocyanate Prepolymer (A)	(pbw)	100
Polyol Curative (B)	(pbw)	56
Recommended % Theory		95
Erapol Temperature	(°C)	25 – 35
Curative Temperature	(°C)	25 – 35
Pot Life at 30°C	(mins)	8 - 12
Demould Time at 25°C	(hours)	2 - 4
Demould Time at 45°C	(hours)	2
Cure at 25°C	(days)	3

The above results are based on 200 gram of mixed sample at 25°C.

Physical Properties

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

		CMD78A	TEST METHOD
Hardness	(Shore A)	80 ± 3	AS1683.15
Tensile Strength	(MPa)	32	AS1683.11
100% Modulus	(MPa)	6	AS1683.11
200% Modulus	(MPa)	12	AS1683.11
300% Modulus	(MPa)	25	AS1683.11
Angle Tear Strength, Die C	(kN/m)	65	AS1683.12
Elongation	(%)	350	AS1683.11
DIN Resilience	(%)	25	DIN 53512
DIN Abrasion Resistance 10N	(mm^3)	35	AS1683.21
Cured Specific Gravity	(g/cm^3)	1.13	AS1683.4

Processing Procedure

1. 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.

2. Weigh the required amount of **Erapol CMD78A** Part A into a container and thoroughly degas at approximately -95kpa of vacuum until excessive foaming stops.

3. 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.

4. Pour mixed **Erapol CMD78A** into moulds which have been precoated with release agent.

5. Allow casting to cure 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 CMD78A 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.