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## Erapol EMD52D

HIGH PERFORMANCE MDI BASED ELASTOMER

### TECHNICAL DATASHEET

**Erapol EMD52D** is high performance hot castable grade, MDI polyurethane elastomer based on PTMEG polyols.

This product is an elastomer with outstanding toughness and abrasion properties, which is characteristic of MDI systems. This product has been specifically designed for the rebound properties and high hardness for skateboard wheels.

**Erapol EMD52D** is normally cured with 1,4 Butane Diol to produce a 52 Shore D elastomer.

#### Product Specification

% NCO	10.6 ± 0.2
Specific Gravity at 25°C	1.05
Viscosity at 80°C (cps)	400 - 1200
Colour	Milky White translucent liquid

#### Mixing and Curing Conditions

		EMD52D / 1,4 Butane Diol
Erapol EMD52D	(pph)	100
1,4 Butane Diol Level	(pph)	10.8
Erapol Temperature	(°C)	70 - 80
1,4 Butane Diol Temperature	(°C)	25 - 30
Pot Life	(mins)	2 - 3
Mould Temperature	(°C)	110 - 120
Oven Temperature	(°C)	110 - 120
Demould Time	(mins)	45
Post Cure Time at 80 – 90°C	(hrs)	16



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.

		EMD52D/1,4 Butane Diol	TEST METHOD
<b>Hardness</b>	(Shore D)	52 ± 3	AS1683.15
<b>Tensile Strength</b>	(MPa)	36	AS1683.11
<b>50% Modulus</b>	(MPa)	11.1	AS1683.11
<b>100% Modulus</b>	(MPa)	13.1	AS1683.11
<b>200% Modulus</b>	(MPa)	16.7	AS1683.11
<b>300% Modulus</b>	(MPa)	21.0	AS1683.11
<b>Elongation</b>	(%)	450	AS1683.11
<b>Angle Tear Strength, Die C</b>	(kN/m)	145	AS1683.12
<b>Trouser Tear Strength</b>	(kN/m)	45	AS1683.12
<b>DIN Resilience</b>	(%)	49	DIN 53512
<b>DIN Abrasion Resistance 10N</b>	(mm <sup>3</sup> )	45	AS1683.21
<b>Compressive Stress (10% deformation)</b>	(MPa)	5	AS2498.3
<b>Cured Specific Gravity</b>	(g/cm <sup>3</sup> )	1.10	AS1683.4

## Processing Procedure

1. Carefully weigh the correct amount of **part A** into a container and heat to 70-80°C and thoroughly degas under vacuum at -95 kPa
2. Carefully weight correct proportion of the **1,4 Butane Diol** into **part A** and, mix thoroughly. Be careful not to entrap air whilst mixing. (If there are a lot of bubbles in the sample at this stage, the mixed material can be degassed again.)
3. Pour the mixed materials into moulds that have been preheated to 100-120°C and pre-coated with release agent, being careful to avoid trapping air.
4. Allow casting to cure before demoulding.

## Handling Precautions

**Erapol EMD52D** should be used in well-ventilated area. Avoid breathing in vapours 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 vapours, remove exposed person to fresh air. Call a physician.