

TECHNICAL DATASHEET

Eracure 210 is a new curative developed to cure the EMD series of MDI prepolymers giving a hardness range from 83 Shore A – 50 Shore D.

Eracure 210 curative has the advantage over 1,4 Butanediol in that a longer gel time is achieved giving the operator enough time to mix and pour large parts by hand mixing with relative ease.

Application

The finished polyurethane elastomer exhibit excellent physical properties, including good tensile strength, high resilience and excellent wear characteristics as well as outstanding hydrolytic stability.

Processing

Eracure 210 curative is liquid at temperatures above 18°C. It must be thoroughly mixed prior to use. **Eracure 210** is not regulated for transport, though we strongly advise that the product MSDS be read prior to use.

% Theory

Selection of 95% theory is generally recommended. Lowering it to 85% theory will improve compression set and raise 300% modulus (tensile). Increasing to 105% theory will enhance tear strength and elongation.

Mix Ratio

The following equation calculates the amount of Eracure 210 required for 100 parts (by weight) of prepolymer.

$$\text{pph Eracure 210} = \frac{\% \text{NCO} \times 1.07 \times \% \text{Theory}}{100}$$

%Theory is expressed as a decimal, i.e. 95% Theory is 0.95 for the calculation.

Mould temperature and Post Cure

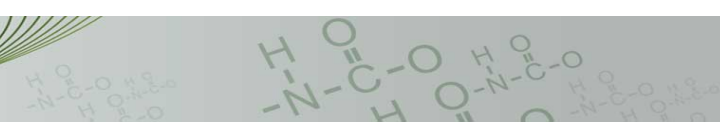
Mould temperature is generally higher than mix temperature. Moulds should be preheated between 80 - 100°C and maintained at that temperature during cure. Demould time will vary with prepolymer and part size.

The recommended post cure is 16 hours at 80-100°C.

Storage, Handling and Safety

Eracure 210 is delivered in sealed containers and protected from moisture and oxidation by dry nitrogen. The product is particularly hygroscopic, therefore containers should not be left open to the atmosphere. Chemical stability is excellent under normal conditions, but storage in areas of excess heat and/or high humidity should be avoided. Flush an opened container with dry nitrogen before resealing.

Refer to MSD'S for further information.



PREPOLYMER USED	EMD 75A	EMD 85A	EMD 90A	EMD 93A	EMD 96A	EMD 52D
% NCO	5.1 ± 0.25	6.5 ± 0.25	7.8 ± 0.25	8.8 ± 0.25	9.6 ± 0.25	10.6 ± 0.25
Mix Ratio	100/5.20	100/6.61	100/7.93	100/8.95	100/9.76	100/10.8
% Theory	95	95	95	95	95	95
Prepolymer Temperature (°C)	70 - 80	70 - 80	70 - 80	70 - 80	70 - 80	70 - 80
Curative Temperature (°C)	20 - 35	20 - 35	20 - 35	20 - 35	20 - 35	20 - 35
Mould Temperature (°C)	100	100	100	100	100	100
Oven Temperature (°C)	100 - 110	100 - 110	100 - 110	100 - 110	100 - 110	100 - 110
Pot Life - Iso at 70°C & Polyol at 30°C (mins)	13 - 15	10 - 13	9 - 12	5 - 8	4 - 7	3 - 5
Demould (hours)	3	3	3	2	2	1
Post Cure at 90-100°C (hours)	16	16	16	16	16	16

PHYSICAL PROPERTIES		EMD 75A	EMD 85A	EMD 90A	EMD 93A	EMD 96A	EMD 52D
Hardness	(shore A/D)	75 ± 3 A	82 ± 3 A	88 ± 3 A	93 ± 3 A	95 ± 3 A	50 ± 3 D
Abrasion - DIN	(mm ³)	38	48	65	66	61	57
Resilience- DIN 53512	(%)	73	65	67	63	55	50
Tensile Strength	(MPa)	27	26	27	27	25	28
Elongation	(%)	500	426	422	416	352	330
Angle Tear	(kN/m)	50	56	60	61	59	64
Trouser Tear	(kN/m)	14	11	11	14	20	14
Compressive Stress	(MPa)	-	2	2.5	3	4	5
Compression Set - AS 1683.13	(%)	-	-	-	-	-	-
	70°C – 24hours	-	-	-	-	14.9	-
	70°C – 100 hours	-	-	-	-	16.2	-
Linear Shrinkage	(%)	1.1	1.1	1.1	1.2	1.3	1.4
Cured Density		1.1	1.1	1.1	1.1	1.1	1.1