

TECHNICAL DATASHEET

Eracast PS100 85A is a high-performance elastomer to be used with **MDI 50103**. It produces elastomers of 68 - 73 Shore A hardness.

Application

Elastomers produced using **Eracast PS100 85A** are designed for applications where low temperature flexibility, chemical and oil resistance, high mechanical strength and extremely good abrasion resistance is required.

Product Specification

	PS100 85A POLYOL CURATIVE	MDI 50103 ISOCYANATE PREPOLYMER
Specific Gravity at 25°C	1.08	1.20
Viscosity at 25°C (cPs)	-	530 - 750
Appearance	White liquid	Light yellow liquid

Mixing and Curing Conditions

		PS100 85A / MDI 50103
PS100 85A	(pph)	100
MDI 50103	(pph)	49
Recommended % Theory		95
PS100 85A Temperature	(°C)	23 - 25
MDI 50103 Temperature	(°C)	23 - 25
Pot Life at 23°C*	(mins)	3.5 - 4
Demould Time at 50°C	(mins)	15 - 20
Post Cure Time at 25°C	(hrs)	24

*Pot life measured on a 250g mix.

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.

		PS100 85A / MDI 50103	TEST METHOD
Hardness	(Shore A)	68 - 73	ASTM D2240
Tensile Strength	(MPa)	29	DIN 53504
100% Modulus	(MPa)	16	DIN 53504
Elongation	(%)	285	DIN 53504
Tear Strength	(kN/m)	30	ASTM D624

Note: During processing, the material will experience up to 2% shrinkage due to the heat of the reaction.

Optimum physical results will be achieved if the elastomers are allowed to fully cure over a period of 7 days before being used in application.

Processing Procedure

As with all polyurethane products, the product should not be exposed to very strong acids or bases. The highest temperature at which the product should be used is 80 to 85°C in order to maintain the full physical properties. The material can tolerate short period temperature increases up to approximately 120°C without permanently impairing any of the physical properties. It should be noted that high temperature applications should be tested and not taken on faith. This is a guide only.

Eracast PS100 85A requires to be processed at a temperature of 25°C but can be processed at higher temperatures either to shorten moulding cycle times or to reduce viscosity to suit particular processing methods.

1. Temperatures of chemicals should be at about 25°C prior to processing. Tumble or stir drum of **PS100 85A** thoroughly to ensure contents are homogeneous. If **MDI 50103** has crystallized, melt out at 70°C and tumble.
2. Mix components together thoroughly without entraining air.
3. Pour the mixture into preheated moulds treated with a suitable release agent.
4. Allow the mixture to gel and partially cure in the mould. The time required for this operation will vary according to oven temperature, mould design and size, but will be in the region of 25 - 35 minutes.
5. Demould the finished piece and post cure overnight at room temperature. Optimum properties are attained after a further seven days at room temperature.

Note: any metal substrate which is to be lined or coated should be degreased, shot blasted or sandblasted and primed with a suitable priming system to ensure good adhesion of the urethane to the metal.

Packaging

Standard packs consist of 25kg plastic and/or steel drums. Larger packs are available on request.

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Shelf Life

Six months minimum in sealed undamaged drums stored at ambient temperatures. Prolonged or repeated heating of the material will accelerate decomposition. Partly used containers should be resealed immediately after use.

Handling Precautions

Eracast PS100 85A does not represent a significant health hazard to users under normal conditions of industrial exposure.

MDI 50103 is an isocyanate containing material and normal standards of industrial hygiene should be observed during its handling. Safety goggles, gloves and overalls should be worn, and the material should preferably be used in a well-ventilated area. Inhalation of its vapours should be avoided.

Please read MSDS before handling the products.

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