

LOW SHRINKAGE HIGH HARDNESS CASTING URETHANE

TECHNICAL DATASHEET

Poliuretahn Resine is an easy to use casting urethane for hard, plastic materials. This is an MDI polyether based polyurethane elastomer. This is a two part polyurethane casting system and cures at room temperature.

It offers advantages in that it can be readily processed and cured at room temperature. The convenient mix ratio and low viscosity allow easy processing either by hand or via machine mixing.

Application

Point of sale purchase displays, rigid castings, special effects or where hard plastic materials are required.

Benefits

- LOW EXOTHERM <80°C
- OPAQUE SAMPLE AS IT CURES
- CONVENIENT MIX RATIO

Product Specification

	ISOCYANATE PREPOLYMER (A)	POLYOL CURATIVE (B)
Specific Gravity at 25°C	1.19	1.02
Viscosity at 25°C (cps)	400	200
Appearance	Light Brown Liquid	Straw to Hazy Colour

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.

Mixing and Curing Conditions

Isocyanate Prepolymer (A)	(pbw)	100
Polyol Curative (B)	(pbw)	100
Prepolymer (A) Temperature	(°C)	25 – 30
Curative (B) Temperature	(°C)	25 – 30
Pot Life at 25°C mix temperature*	(mins)	3 – 5
Cure	(hrs)	24 hrs at 25°C will result in an 80% cure. Fully cured at 7 days at 25°C.
Demould Time at 25°C	(mins)	15 – 30

*Potlife based on 200 grams hand mixed sample.

Typical Cured Properties

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

		TLS70D	TEST METHOD
Hardness	(Shore D)	67 – 72	AS1683.15
Tensile Strength	(MPa)	36	AS1683.11
Angle Tear Strength	(kN/m)	65	AS1683.12
Elongation	(%)	12	AS1683.11
Rebound Resilience	(%)	63	DIN 53512
Specific Gravity	(g/cm ³)	1.11	AS1683.4
Izod Impact Strength, unnotched	(KJ/m ²)	26	
Linear Shrinkage	(%)	0.04	

Poliurethane Resine can be mixed by hand or readily processed through suitable polyurethane dispensing equipment.

NOTE: Both Part A and B components are moisture sensitive. Once opened, containers should be purged with nitrogen, if they are to be stored for a period of time.

Processing Procedure

1. Carefully weigh the correct proportions of the two components together in one container, mix thoroughly. Be careful not to entrap air whilst mixing – apply vacuum to remove excess air and bubbles.
2. Pour the mixed material into moulds that have been prepared with release agent, being careful to avoid trapping air.
3. Allow casting to cure before demoulding.

Note: Use clean and dry plastic containers and if you need to add filler ensure the filler is dry (dry in the oven at 100°C if required to remove moisture) – if to use filler is required please discuss with Era first.

Handling Precautions

Poliurethane Resine should be used in well-ventilated areas. Avoid breathing in vapours and protect skin and eyes from 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. Call a physician.

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