

60D / Mass Cast Urethane

Tough, abrasion resistant elastomer

Key Properties

- Excellent physical properties after RT cure
- Free of mercury, MOCA or TDI

Applications

- For room temperature hand-batch processing
- For very large parts as well as mass casting.

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	50
		pbv	100	48
Density	ASTM D-792	g/cm ³	ca. 1.14	ca. 1.18
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 5,800	ca. 80

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 2,750
Gel time at 77°F (25°C)		min	20-30
Demold time at 77°F (25°C)		h	4-8

Cured / Mechanical Properties (approximate values)

Cure 1: 24 hours at 77°F + 16 hours at 150°F

Cure 2: 7 days at 77°F

			Cure 1	Cure 2
Aspect	visual		Translucent Amber	Translucent Amber
Density	ASTM D-792	g/cm ³	1.14	1.14
Shore hardness D	ASTM D-2240		50-60	50-60
Tensile strength	ASTM D-638	psi	2,800	3,000
Elongation at Break	ASTM D-638	%	20	100
Tear strength	ASTM D-624	pli	350	370
Flexural modulus	ASTM D-790	psi	38,000	45,000
Notched Izod	ASTM D-256	ft·lbf/in	6.0	9.0
Linear shrinkage	ASTM D-2566	in/in	N/A	.001

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Processing

The processing and material temperature should be between 68-77°F (20-25°C).

For best results, de-air the material prior to casting, then pressurize to 60 psi until cured.

The hardener component will darken as it ages. It is recommended that dry nitrogen be used to blanket the material to prevent or lengthen the time that it takes for this oxidization to occur. This oxidization can also occur with the cured materials, causing them to darken as they age.

Packaging

IE-3644 Quart Kit	3 lbs.
IE-3644 1 Gal. Kit	12 lbs.
IE-3644 5 Gal. Kit	60 lbs.
IE-3644 Drum Kit	675 lbs.

Storage

Original containers should be kept tightly sealed and stored at ambient temperatures 59-86°F (15°C to 30°C). If properly stored the products have the shelf-life indicated on the product label.

Partly used containers should always be sealed appropriately and used up as soon as possible.

Handling Precautions

Good workplace ventilation is to be ensured during processing. At the same time, the employer's liability insurance association's industrial hygiene safety regulations regarding the handling of reaction resins and their hardeners are to be observed. Please take heed of the appropriate safety data sheets.
