

IE-3000 Series Extended Gel

Rigid polyurethane

Key Properties

- Excellent physical properties after RT cure
- Free of mercury, MOCA or TDI
- Excellent green strength yielding enhanced demold characteristics
- Yields easy to paint surfaces requiring little preparation

Applications

- For hand-batch processing or vacuum cast methods

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	92
		pbv	100	100
Density	ASTM D-792	g/cm ³	ca. 1.16	ca. 1.06
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 75	ca. 450

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 150
Gel time at 77°F (25°C)		min	15-20
Demold time at 77°F (25°C)		h	1-3

Cured / Mechanical Properties (approximate values)

Cure 1: 7 days at 77°F			Cure 1
Aspect	visual		White
Density	ASTM D-792	g/cm ³	1.06
Shore hardness D	ASTM D-2240		65-75
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	143 (62)
Tensile strength	ASTM D-638	psi	4,950
Elongation at Break	ASTM D-638	%	24
Flexural strength	ASTM D-790	psi	6,000
Flexural modulus	ASTM D-790	psi	145,000
Compression modulus	ASTM D-695	psi	165,000
Notched Izod	ASTM D-256	ft-lbf/in	0.6
Linear shrinkage	ASTM D-2566	in/in	0.002-0.006

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

Formulated for hand-batch or vacuum assisted casting equipment. For best results, de-air the material prior to casting, then pressurize to 60 psi until cured.

Agitate the hardener and resin before mixing to ensure that the formula is homogeneous.

Packaging

IE-3071 Quart Kit	3.84 lbs.
IE-3071 1 Gal. Kit	15.36 lbs.
IE-3071 5 Gal. Kit	76.8 lbs.
IE-3071 Drum Kit	864 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.
