

# RAKU® TOOL IE-3092-1

## 75D Polyether Rigid polyurethane

Revision Date: 10/08/2020

### Key Properties

- Excellent physical properties after RT cure
- Low viscosity
- Free of mercury, MOCA, TDI, or phthalates
- Fast setting system
- Easily pigmented
- Excellent abrasion resistance
- Antimicrobial

### Applications

- For room temperature hand-batch processing
- Ideal for climbing hold production

### Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	90
		pbv	100	100
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.14	ca. 1.03
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 40	ca. 300
			Mixture	
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 150	
Gel time at 77°F (25°C)		min	6-8	
Demold time at 77°F (25°C)		min	40-60	

### Cured / Mechanical Properties (approximate values)

Cure: 7 days at 77°F			Cure
Aspect	visual		Off-White Translucent
Density	ASTM D-792	g/cm <sup>3</sup>	1.12
Shore hardness D	ASTM D-2240		70-80
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	122 (50)
Tensile strength	ASTM D-638	psi	8,300
Elongation at break	ASTM D-638	%	8
Flexural strength	ASTM D-790	psi	9,200
Flexural modulus	ASTM D-790	psi	250,000
Notched Izod	ASTM D-256	ft.lbs./in	0.80
Taber Abrasion*	ASTM D-4060	mg loss	199
Linear shrinkage	ASTM D-2566	in/in	0.002-0.005

\*H-18 wheel, 1000g load, 1000 cycles

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## Processing

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

This system has been designed to ease the release of mixed air without degassing or pressure. However, for best results, de-air the material prior to casting, then pressurize to 60 psi.

**Agitate the hardener before use to ensure that the formula is homogeneous.**

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## Packaging

IE-3092-1 Quart Kit	3.8 lbs.
IE-3092-1 1 Gal. Kit	15.20 lbs.
IE-3092-1 5 Gal. Kit	76 lbs.
IE-3092-1 Drum Kit	855 lbs.

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## 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.

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## 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.

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Our recommendations on the use of the material are based on many years of experience and current scientific and practical knowledge. They are, however, provided without any obligation on our part and do not relieve the buyer of the need for suitability tests. They do not constitute a legal relationship, nor are any protected third party rights whatsoever affected thereby.