# RAKU-TOOL<sup>®</sup> InnoFR<sup>™</sup> FX-8581



# Fire Extinguish 80D High Heat

# Rigid polyurea system

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Key Properties	Applications		
<ul> <li>Evaluat physical properties after PT auro</li> </ul>	<ul> <li>Formulated for bond batch or vo</li> </ul>	outing	

- Excellent physical properties after RT cure
- Free of mercury, MOCA or TDI
- UL94 V-0 approved, UL94 V-5A approved
- Formulated for hand-batch or vacuum casting methods

# **Processing Properties**

			Resin (Isocyanate)	Hardener (Polyol)
Mire westing		pbw	90	100
Mix ratio		pbv	89	100
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.26	ca. 1.33
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 2,600	ca. 15,240

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 5,240
Gel time at 77°F (25°C)		min	10-20
Demold time at 77°F (25°C)		h	1-2

## **Cured / Mechanical Properties (approximate values)**

Cure 1: 24 hours at 77°F + 16 hours at 180°F Cure 2: 7 days at 77°F + 16 hours at 180°F			Cure 1	Cure 2
Aspect	visual		Amber	Amber
Density	ASTM D-792	g/cm <sup>3</sup>	1.30	1.30
Shore hardness D	ASTM D-2240		75-85	75-85
Heat Deflection Temp.(66psi)	ASTM D-648	°F(°C)	187 (86)	220 (104)
Elongation at break	ASTM D-638	%	6	4
Ultimate Flex Strength (psi)	ASTM D-790	psi	18,850	19,000
Flexural Modulus	ASTM D-790	psi	665,000	700,000
Notched Izod (ft.lbs./in.)	ASTM D-256	ft.lbs./in	0.40	0.40
Linear shrinkage	ASTM D-2566	in/in	.002008	.002008

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Rigid polyurethane system



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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 60psi until cured. FX-8581 has a filler on both sides of the material. Agitation is required before mixing. The hardener component will darken as it ages. It is recommended that dry nitrogen be used to blanket the material to prevent oxidation and from becoming moisture contaminated.

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

Packaging	
FX-8581 Quart Kit	3.8 lbs.
FX-8581 1 Gal. Kit	15.2 lbs.
FX-8581 5 Gal. Kit	76 lbs.
FX-8581 Drum Kit	855 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.

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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.