

## Rigid FDA System

Rigid polyurethane

© RAMPF Tooling Solutions GmbH & Co. KG

PC - Rev.-Status: 01- 2016/08/18

Page 1 of 2

### Key Properties

- Excellent physical properties after RT cure
- Free of mercury, MOCA or TDI
- FDA Approved raw materials CFR21.177.1680

### Applications

- For room temperature hand-batch processing

### Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	50
		pbv	100	55
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.17	ca. 1.06
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 50	ca. 1,450

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 250
Gel time at 77°F (25°C)		min	8-12
Demold time at 150°F (66°C)		hr	1

### Cured / Mechanical Properties (approximate values)

**Cure 1: 1 hour at 150°F + 24 hours at 77°F**  
**Cure 2: 7 days at 77°F**

			Cure 1	Cure 2
Aspect	visual		Translucent	Translucent
Density	ASTM D-792	g/cm <sup>3</sup>	1.17	1.17
Shore hardness D	ASTM D-2240		70-80	70-80
Tensile strength	ASTM D-638	psi	4,900	4,600
Elongation at break	ASTM D-638	%	13	15
Ultimate Flex Strength (psi)	ASTM D-790	psi	5,400	8,200
Flexural Modulus	ASTM D-790	psi	153,000	235,000
Notched Izod (ft.lbs./in.)	ASTM D-256	ft.lbs./in	1.5	1.7
Heat Deflection Temp.(66psi)	ASTM D-648	°F(°C)	170(77)	169(76)
Linear shrinkage	ASTM D-2566	in/in	.0031-.005	.001-.005

---

## Processing

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

Formulated for hand-batch equipment. For best results, de-air material prior to casting, then pressurize to 60 psi until cured. To avoid inhibition from silicone rubber molds, preheat the silicone tool to 120°F. It is recommended that a test sample be prepared to verify compatibility. It is recommended that a mild heat cure be used to expedite the cure and feel. If no heat is used on a part with minimal wall sections, it will remain floppy for several days. When following the 1 hour at 150°F recommendation, the part will be ready to demold upon cooling of the mold without any adverse flexibility.

**Agitate the hardener and resin before use to ensure that the formula is homogenous.**

---

---

## Packaging

IE-3017 Quart Kit	3 lbs.
IE-3017 1 Gal. Kit	12 lbs.
IE-3017 5 Gal. Kit	60 lbs.
IE-3017 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.

---

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.