

## Flame Retardant / Rigid

Rigid polyurethane

### Key Properties

- Excellent physical properties
- Free of mercury, MOCA or TDI
- UL94 V-0 certified

### Applications

- For hand-batch or vacuum assisted casting methods

### Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	50
		pbv	100	54
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.30	ca. 1.20
Viscosity at 100°F (38°C)	ASTM D-2393	cP	ca. 950	ca. 550

			Mixture
Mix viscosity at 100°F (38°C)	ASTM D-2393	cP	ca. 1,000
Gel time at 77°F (25°C)		min	5:30-8:30
Demold time at 77°F (25°C)		h	1:30-3:30

### Cured / Mechanical Properties (approximate values)

**Cure 1: 24 hours at 77°F + 16 hours at 180°F**  
**Cure 2: 7 days at 77°F**

			Cure 1	Cure 2
Aspect	visual		White	White
Density	ASTM D-792	g/cm <sup>3</sup>	1.25	1.25
Shore hardness D	ASTM D-2240		75-85	75-85
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	176 (80)	149 (65)
Tensile strength	ASTM D-638	psi	6,200	6,200
Elongation at Break	ASTM D-638	%	14	8
Flexural strength	ASTM D-790	psi	11,000	11,000
Flexural modulus	ASTM D-790	psi	300,000	325,000
Notched Izod	ASTM D-256	ft·lbf/in	0.7	0.7

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### Processing

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

Demold times are achieved by post curing for 1 hour at 150°F.

Pre-heat tools to 150 °F for improved demold time and enhanced physical properties. For best results, de-air the material prior to casting, then pressurize to 60 psi until cured. If pigment has been added to the hardener component, it will settle during storage.

**Agitate Hardener and Resin before mixing to ensure a homogenous formulation.**

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### Packaging

VA-1257 Quart Kit	3 lbs.
VA-1257 1 Gal. Kit	12 lbs.
VA-1257 5 Gal. Kit	60 lbs.
VA-1257 Drum Kit	675 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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