

## Flame Retardant / High Heat Resistance

Impact resistant polyurea

### Key Properties

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

### Applications

- For vacuum assisted casting systems and short mold cycle times

### Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	50
		pbv	100	50
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.22	ca. 1.22
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 700	ca. 200
			Mixture	
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 350	
Gel time at 77°F (25°C)		min	1:25-1:35	
Demold time at 77°F (25°C)		min	30-50	

### 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		Black	Black
Density	ASTM D-792	g/cm <sup>3</sup>	1.22	1.22
Shore hardness D	ASTM D-2240		65-75	65-75
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	146 (63)	153 (67)
Tensile strength	ASTM D-638	psi	6,200	4,900
Tensile modulus	ASTM D-638	psi	134,400	105,400
Elongation at Break	ASTM D-638	%	11	18
Flexural strength	ASTM D-790	psi	7,400	7,700
Flexural modulus	ASTM D-790	psi	156,000	168,300
Notched Izod	ASTM D-256	ft·lbf/in	2.0	2.5
Linear shrinkage	ASTM D-2566	in/in	0.001-0.005	0.001-0.005

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**Processing**

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

TP-4015 has been formulated for meter-mix dispensing equipment. It is recommended that dry nitrogen be used to protect the material from oxidizing and being moisture contaminated.

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

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**Packaging**

TP-4015 Quart Kit	3 lbs.
TP-4015 1 Gal. Kit	12 lbs.
TP-4015 5 Gal. Kit	60 lbs.
TP-4015 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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