

## High Impact / 1 to 1 PBV

Rigid, impact resistant polyurethane

### Key Properties

- Excellent physical properties after mild post cure
- Free of mercury, MOCA or TDI
- Tough ABS simulated product

### Applications

- For hand-batch processing, vacuum-assist casting or meter mix dispense methods

### Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	91
		pbv	100	100
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.20	ca. 1.09
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 500	ca. 1,100

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 900
Gel time at 77°F (25°C)		min	2-4
Demold time at 77°F (25°C)		min	30-60

### Cured / Mechanical Properties (approximate values)

Cure 1: 2 hours at 150°F + 24 hours at 77°F Cure 2: 2 hours at 150°F + 7 days at 77°F			Cure 1	Cure 2
Aspect	visual		White	White
Density	ASTM D-792	g/cm <sup>3</sup>	1.15	1.15
Shore hardness D	ASTM D-2240		75-85	75-85
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	158 (70)	158 (70)
Tensile strength	ASTM D-638	psi	10,300	10,500
Elongation at Break	ASTM D-638	%	5	5
Flexural strength	ASTM D-790	psi	11,200	11,000
Flexural modulus	ASTM D-790	psi	303,300	304,000
Notched Izod	ASTM D-256	ft·lbf/in	1.9	1.8
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).**

For best results, de-air the material prior to casting, then pressurize to 60 psi until cured. Depending on the temperature of the old and mass of the part, the color of this product will change. If the mold is preheated to 150°F, the demold time will be reduced to an hour or less. This material does not have to be used in conjunction

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

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### Packaging

TP-4058 Quart Kit	3.82 lbs.
TP-4058 1 Gal. Kit	15.28 lbs.
TP-4058 5 Gal. Kit	76.4 lbs.
TP-4058 Drum Kit	859.5 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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