

High Impact / High Heat Resistance / Polypropylene Feel

Impact resistant polyurea

Key Properties

- Excellent physical properties
- Free of mercury, MOCA or TDI

Applications

- For room temperature hand-batch systems or vacuum assisted casting systems

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	71
		pbv	100	70
Density	ASTM D-792	g/cm ³	ca. 1.14	ca. 1.15
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 1,800	ca. 1,100

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 580
Gel time at 77°F (25°C)		min	8-12
Demold time at 77°F (25°C)		h	1-2

Cured / Mechanical Properties (approximate values)

			Cure 1	Cure 2
Cure 1: 24 hours at 77°F + 1 hour at 150°F				
Cure 2: 7 days at 77°F				
Aspect	visual		Light Amber	Light Amber
Density	ASTM D-792	g/cm ³	1.14	1.14
Shore hardness D	ASTM D-2240		75-85	75-85
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	176 (80)	160 (71)
Tensile strength	ASTM D-638	psi	7,500	7,500
Elongation at Break	ASTM D-638	%	17	10
Flexural strength	ASTM D-790	psi	7,750	8,800
Flexural modulus	ASTM D-790	psi	155,000	200,000
Notched Izod	ASTM D-256	ft-lbf/in	3.0	2.8
Linear shrinkage	ASTM D-2566	in/in	0.001-0.005	0.001-0.005

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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.

The hardener component will darken as it ages. It is recommended that dry nitrogen be used to protect the material from oxidizing and being moisture contaminated. The cured material will also oxidize over a short period of time. This will cause the material to slightly darken in shade.

Packaging

TP-4008 Quart Kit	3.42 lbs.
TP-4008 1 Gal. Kit	13.68 lbs.
TP-4008 5 Gal. Kit	68.4 lbs.
TP-4008 Drum Kit	769.5 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.
