

High Flex Modulus / High Impact / 8 Min. Gel Time

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

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	100
		pbv	90	100
Density	ASTM D-792	g/cm ³	ca. 1.36	ca. 1.23
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 150	ca. 2,200

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 1,000
Gel time at 77°F (25°C)		min	6-10
Demold time at 77°F (25°C)		h	1-3

Cured / Mechanical Properties (approximate values)

Cure 1: 2 hours at 150°F + 24 hours at 77°F Cure 2: 7 days at 77°F			Cure 1	Cure 2
Aspect	visual		White	White
Density	ASTM D-792	g/cm ³	1.25	1.25
Shore hardness D	ASTM D-2240		80-90	80-90
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	167 (75)	140 (60)
Tensile strength	ASTM D-638	psi	9,500	9,000
Elongation at Break	ASTM D-638	%	4	3
Flexural strength	ASTM D-790	psi	15,600	16,200
Flexural modulus	ASTM D-790	psi	500,000	450,000
Notched Izod	ASTM D-256	ft·lbf/in	0.7	0.7
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 material prior to casting, then pressurize to 60 psi until cured. 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 with heat. However, significant improvements in HDT are made when using the post cure methods above.

The components can freeze when stored or shipped in temperatures below 32°F. In the event your system freezes, call your RAMPF Group Inc. representative to discuss reconstitution methods.

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

Packaging

TP-4053 Quart Kit	4 lbs.
TP-4053 1 Gal. Kit	16 lbs.
TP-4053 5 Gal. Kit	80 lbs.
TP-4053 Drum Kit	900 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.
