RAKU® TOOL
InnoTuf® TP-4056

RAMPF
discover the future

User Friendly / High Impact / 2-3 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
- Very low mixed viscosity and great demold characteristics

Applications

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

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	100
		pbv	90	100
Density	ASTM D-792	g/cm³	ca. 1.21	ca. 1.09
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 75	ca. 1,100

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 325
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: 16 hours at 180°F + 7 days at 77°F			Cure 1	Cure 2
Aspect	visual		White	White
Density	ASTM D-792	g/cm³	1.09	1.09
Shore hardness D	ASTM D-2240		75-85	75-85
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	158 (70)	176 (80)
Tensile strength	ASTM D-638	psi	8,200	8,500
Elongation at Break	ASTM D-638	%	20	20
Flexural strength	ASTM D-790	psi	11,500	11,500
Flexural modulus	ASTM D-790	psi	225,000	250,000
Notched Izod	ASTM D-256	ft·lbf/in	2.0	1.8
Linear shrinkage	ASTM D-2566	in/in	0.001-0.005	0.001-0.005

Processing

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. Depending on the temperature of the mold and mass of the part, the color of this product will change. If the mold is room temperature and the mass is small, the color will remain translucent. If the mold is preheated to 150°F, the part will turn white and 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-4056 Quart Kit	4 lbs.
TP-4056 1 Gal. Kit	16 lbs.
TP-4056 5 Gal. Kit	80 lbs.
TP-4056 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.

RAMPF Group, Inc.
49037 Wixom Tech Drive
Wixom, MI 48393
T +1 248. 295.0223
F +1 248. 295.0224
E info.us@rampf-group.com
www.rampf-group.com