

TP-4004 / Fast / Black

Impact resistant polyurea

Key Properties

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

Applications

- For room temperature hand-batch or machine dispensable systems

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	53
		pbv	100	50
Density	ASTM D-792	g/cm ³	ca. 1.16	ca. 1.24
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 5,100	ca. 100

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 2,100
Gel time at 77°F (25°C)		min	4-6
Demold time at 77°F (25°C)		min	60-120

Cured / Mechanical Properties (approximate values)

Cure 1: 7 days at 77°F Cure 2: 24 hours at 77°F + 1 hour at 150°F			Cure 1	Cure 2
Aspect	visual		Black	Black
Density	ASTM D-792	g/cm ³	1.18	1.18
Shore hardness D	ASTM D-2240		65-75	65-75
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	186 (85)	230 (110)
Tensile strength	ASTM D-638	psi	4,000	5,500
Elongation at Break	ASTM D-638	%	70	55
Flexural strength	ASTM D-790	psi	3,600	4,700
Flexural modulus	ASTM D-790	psi	110,000	100,000
Notched Izod	ASTM D-256	ft·lbf/in	6.5	6.0
Linear shrinkage	ASTM D-2566	in/in	0.002-0.008	0.002-0.008

TP-4004 / Fast / Black

Impact resistant polyurea

Processing

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

Formulated for hand casting or meter-mix dispensing equipment. For best results, 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 becoming moisture contaminated. The hardener component contains black pigment which will separate during storage.

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

Packaging

TP-4045 Quart Kit	3.06 lbs.
TP-4045 1 Gal. Kit	12.24 lbs.
TP-4045 5 Gal. Kit	61.2 lbs.
TP-4045 Drum Kit	688.5lbs.

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.
