

Innothane®

Product Name **InnoTuf® TP-4020**
TP-4006 W/High Flex Modulus

Description TP-4020 is a stiff polyurethane formulated for room temperature hand-batch systems or vacuum casting systems. Excellent physical properties can be obtained without the utilization of mercury, MOCA, or TDI.

Physical Properties

Mix Ratio	Resin:Hardener (parts by weight)		100:46	
Mix Ratio	Resin:Hardener (parts by volume)		100:52	
Viscosity (cps@100°F)	Resin	7800	Gel Time	10 ± 2 Minutes
	Hardener	500	Demold Time*	1 Hour at 150°F
	Mixed	1300	Color	Tan
Specific Gravity (g/cc)	Resin	1.40	*Demold time is always mass dependant	
	Hardener	1.24		

Cure 1 ► 1 hour at 150°F + 24 hours at 77°F
 Cure 2 ► 7 days at 77°F



Cured Properties

	Method	Cure 1	Cure 2
Hardness (shore D)	ASTM D-2240	80 ± 5	80 ± 5
Tensile Strength (psi)	ASTM D-638	9,800	10,900
Elongation at Break	ASTM D-638	2%	2%
Ultimate Flex Strength (psi)	ASTM D-790	14,600	18,750
Flexural Modulus (psi)	ASTM D-790	400,000	650,000
Notched Izod (ft.lbs./in.)	ASTM D-256	0.4	0.3
Linear Shrink (in./in.)	ASTM D-2566	.001-.005	.001-.005
Heat Deflection Temp. (66psi)	ASTM D-648	172°C / 342°F	174°C / 345°F
Specific Gravity (g/cc)		1.30	1.30

Processing Notes

For best results, de-air the material prior to casting, then pressurize to 60 psi until cured. The resin contains a filler that will settle out of solution.

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

<u>Kit Weights</u>	Quart Kits	1 Gal. Kit	5 Gal. Kit	Drum Kit
	2.92 lbs.	11.68 lbs.	58.4 lbs.	657 lbs.

Safety and Handling

DO NOT USE UNTIL MSDSs HAVE BEEN READ AND UNDERSTOOD. Store containers in a dry location. Partially used containers should be blanketed with dry nitrogen to prevent moisture contamination. Moisture will react with the resin component, creating carbon dioxide gas and a possible pressure increase in the container.

SPECIFICATION WRITERS: The above values are meant to represent typical properties only. Users are encouraged to qualify products in their own laboratories prior to specification publication.

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