

# InnoTooling™ IE-644-05

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

IE-644-05 is a tough, abrasion resistant urethane formulated for room temperature meter-mix dispensing. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA, or TDI.

General Information			
Features	Good Abrasion Resistance		
	Good Toughness		
RoHS Compliance	RoHS Compliant		
Appearance	Amber		
Physical	Nominal Value	Unit	
Specific Gravity			
Cured	1.14	g/cm <sup>3</sup>	
Base Resin	1.14	g/cm <sup>3</sup>	
Hardener	1.18	g/cm <sup>3</sup>	
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	262	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	320	J/m	ASTM D256
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 50		
Hardener	Mix Ratio by Weight: 51		
	Mix Ratio by Weight: 100		
Resin	Mix Ratio by Volume: 100		
Demold Time	10 to 20	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
25°C <sup>1</sup>	0.080	Pa·s	
25°C <sup>2</sup>	2.8	Pa·s	
25°C <sup>3</sup>	5.8	Pa·s	
Curing Time <sup>4</sup>	40	hr	
Gel Time	1.3 to 1.8	min	

Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	50 to 60		ASTM D2240
Tensile Strength	19.3	MPa	ASTM D638
Tensile Elongation at Break	20	%	ASTM D638
Tear Strength	61.3	kN/m	ASTM D624

NOTE			
1.	Hardener		
2.	Mixed		
3.	Resin		
4.	24 hours at 77°F + 16 hours at 150°F		

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