



## Product Name

# IE-80D Polyurethane



## Description

IE-80D is a tough, impact resistant elastomer formulated for room temperature hand-batch or vacuum-assisted casting methods. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA, or TDI. IE-80D is particularly ideal for color-matching applications due to its neutral semi-transparent appearance.

## Physical Properties

<b>Mix Ratio</b>	Resin:Hardener (parts by weight)		<b>100:100</b>	
<b>Mix Ratio</b>	Resin:Hardener (parts by volume)		<b>89:100</b>	
<b>Viscosity</b> (cps@77°F)	Resin	50	<b>Gel Time</b>	15 ± 2 Minutes
	Hardener	800		<b>Demold Time*</b>
	Mixed	400	<b>Color</b>	
<b>Specific Gravity</b> (g/cc)	Resin	1.20	* Demold time is always mass dependant	
	Hardener	1.07		

Cure 1 ▶ 7 days at 77°F
Cure 2 ▶ 24 hour at 77°F + 4 hours at 150°F

## Cured Properties

	Method	Cure 1	Cure 2
<b>Hardness (shore D)</b>	ASTM D-2240	80±5	
<b>Tensile Strength (psi)</b>	ASTM D-638	10,100	
<b>Elongation at Break</b>	ASTM D-638	8%	
<b>Compression Strength (psi)</b>	ASTM D-695	8,000	
<b>Compression Modulus (psi)</b>	ASTM D-695	525,000	
<b>Ultimate Flex Strength (psi)</b>	ASTM D-790	N/A	
<b>Flexural Modulus (psi)</b>	ASTM D-790	315,000	
<b>Notched Izod (ft.lbs./in.)</b>	ASTM D-256	0.5	
<b>Linear Shrink (in./in.)</b>	ASTM D-2566	0.002-0.004	
<b>Heat Deflection Temp. (66psi)</b>	ASTM D-648	60°C / 140°F	
<b>Heat Deflection Temp. (264psi)</b>	ASTM D-648	N/A	67°C / 153°F
<b>Specific Gravity (g/cc)</b>		1.12	

## Processing Notes

Formulated for hand-batch or vacuum assisted casting equipment. For best results, de-air the material prior to casting, then pressurize to 60 psi until cured. If pigment has been added to the to the hardener component, it may separate during storage.

**Agitate hardener before mixing to ensure that the formula is homogeneous.**

## Safety and Handling

DO NOT USE UNTIL MSDS 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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