



Product Name

IE-72DC Polyurethane



Description

IE-72DC is a water-clear, rigid polyurethane 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. The unique chemistry of IE-72CD imparts excellent optical clarity as well as U.V. stability.

Physical Properties

Mix Ratio	Resin:Hardener (parts by weight)		100:50
Mix Ratio	Resin:Hardener (parts by volume)		100:55
Viscosity (cps@77°F)	Resin	900	Gel Time
	Hardener	4000	
	Mixed	1200	
Specific Gravity (g/cc)	Resin	1.16	Demold Time*
	Hardener	1.05	
Peak Exotherm	(200g)	138°C / 280°F	Color

* Demold time is always mass dependant

Cure 1 ▶ 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	8,000	10,000
Elongation at Break	ASTM D-638	2%	2%
Compression Strength (psi)	ASTM D-695	N/A	N/A
Compression Modulus (psi)	ASTM D-695	N/A	N/A
Ultimate Flex Strength (psi)	ASTM D-790	N/A	N/A
Flexural Modulus (psi)	ASTM D-790	250,000	325,000
Notched Izod (ft.lbs./in.)	ASTM D-256	0.5	0.6
Linear Shrink (in./in.)	ASTM D-2566	0.004	0.004
Heat Deflection Temp. (66psi)	ASTM D-648	60°C / 140°F	60°C / 140°F
8 hour @ 150°F post-cure (66 psi)	ASTM D-648	77°C / 170°F	N/A
Specific Gravity (g/cc)		1.1	1.1

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. IE-72DC can be easily buffed when cured.

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

Safety and Handling

Although warming the hardener component will reduce the viscosity effectively, it is not recommended that the material be stored in the oven at 100°F or above. This will cause the material to yellow.

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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