

# RapidCast™ RC-79D

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

RC-79D is a rigid, flame retardant polyurethane formulated for room temperature meter-mix dispensing systems and short mold cycle times. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA, or TDI. RC-79D is approved for many medical applications including MRI coil housings and is a UL 94V0 registered flame retardant polyurethane.

General Information			
UL YellowCard	E186128-227029		
Features	Fast Molding Cycle		
	Flame Retardant		
	High Rigidity		
Uses	Medical/Healthcare Applications		
RoHS Compliance	RoHS Compliant		
Appearance	Amber		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Hardener	1.20	g/cm³	
Cured	1.26	g/cm³	
Base Resin	1.38	g/cm³	
Molding Shrinkage - Flow	0.20 to 0.50	%	ASTM D2566
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	2070	MPa	ASTM D790
Flexural Strength	68.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	108	°C	ASTM D648
Flammability	Nominal Value		Test Method
Flame Rating	V-0		UL 94
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
	Mix Ratio by Volume: 100		
Hardener	Mix Ratio by Weight: 100		

Mix Ratio by Weight: 100

Resin	Mix Ratio by Volume: 87		
Demold Time	9.0 to 15	min	
Uncured Properties	Nominal Value	Unit	Test Method
Viscosity			
25°C <sup>1</sup>	0.60	Pa·s	
25°C <sup>2</sup>	1.0	Pa·s	
25°C <sup>3</sup>	2.7	Pa·s	
Curing Time <sup>4</sup>	40	hr	
Gel Time	0.67 to 1.2	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	75 to 85		ASTM D2240
Tensile Strength	41.4	MPa	ASTM D638
Tensile Elongation at Break	6.0	%	ASTM D638
NOTE			
1.	Resin		
2.	Mixed		
3.	Hardener		
4.	24 hours at 77°F + 16 hours at 200°F		

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