

Royalcast® 2505

Polyurethane (Polyether based)

Chemtura

Message:

ROYALCAST 2505 combines the rigidity of an engineering plastic with an excellent balance of physical properties. When cured with MBCA or Ethacure® 300, ROYALCAST 2505 yields an 82-85 Shore D material that is well suited for numerous end use applications.

As a castable material, ROYALCAST 2505 is processed under conditions typically used in an Adiprene/Vibrathane (polyurethane) open casting operation. This allows the molder to use low cost tooling to produce a full range of rigid parts, including:

- Short volume runs
- Large parts
- Parts with thick or varied cross-sections

Additionally, because ROYALCAST 2505 has a moderate demold time, mold turnabout can be high, thus minimizing tooling and direct labor costs.

General Information			
Features	High Rigidity		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.21	g/cm ³	ASTM D792
Molding Shrinkage - Flow	1.3	%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 20°C)	124		ASTM D785
Durometer Hardness			ASTM D2240
Shore D, 100°C	76		
Shore D, 70°C	82		
Shore D, 20°C	85		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	63.4	MPa	ASTM D638
Tensile Elongation (Break)	40	%	ASTM D638
Flexural Modulus	2070	MPa	ASTM D790
Flexural Strength	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (20°C)	110	J/m	ASTM D256
Unnotched Izod Impact (20°C)	2700	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	77.0	°C	ASTM D648
Thermoset	Nominal Value	Unit	
Thermoset Components			
Hardener	Mix Ratio by Weight: 35		
Resin	Mix Ratio by Weight: 100		
Pot Life	2.5	min	
Demold Time	25	min	
Post Cure Time (116°C)	16	hr	

Uncured Properties	Nominal Value	Unit
Color		
-- 1	Clear/Transparent	
-- 2	Opaque	
NOTE		
1.	MBCA Cure	
2.	Royalcast 2505	

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