

Royalcast® 3101

Polyurethane (Polyether based)

Chemtura

Message:

ROYALCAST 3101 is a two-component system that has outstanding processing characteristics. These include:

- Low viscosity at room temperature
- Easy mixing
- Adjustable pot life (1-60 min.)
- Low shrinkage

Additionally, because ROYALCAST 3101 has a moderate demold time, mold turnabout can be high, thus minimizing tooling and direct labor cost. In summary, ROYALCAST 3101 with its good balance of physical properties and processing characteristics is an attractive material candidate for numerous end-use applications that require rigidity.

General Information			
Features	High Rigidity		
	Low Shrinkage		
	Low Viscosity		
Appearance	White		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.12	g/cm ³	ASTM D792
Molding Shrinkage - Flow	1.0	%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 20°C)	115		ASTM D785
Durometer Hardness			ASTM D2240
Shore D, 100°C	73		
Shore D, 70°C	77		
Shore D, 20°C	79		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	45.5	MPa	ASTM D638
Tensile Elongation (Break)	12	%	ASTM D638
Flexural Modulus	1450	MPa	ASTM D790
Flexural Strength	62.1	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	32	J/m	
20°C	37	J/m	
Unnotched Izod Impact			ASTM D256
-40°C	530	J/m	
20°C	530	J/m	
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (1.8 MPa, Unannealed)	107	°C	ASTM D648
Thermoset	Nominal Value	Unit	
Thermoset Components			
Hardener	Mix Ratio by Weight: 28		
Resin	Mix Ratio by Weight: 100		
Pot Life	1.0	min	
Demold Time	8.0	min	
Post Cure Time (100°C)	16	hr	

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