

Ryton® R-7-190BL

Syensqo - Polyphenylene Sulfide

General Information

Product Description

Ryton® R-7-190BL glass fiber and mineral filled polyphenylene sulfide compound provides enhanced strength and low maintenance molding using conventional molding equipment.

General

Filler / Reinforcement	• Glass Fiber/Mineral
Features	• Chemical Resistant • Good Electrical Properties • Good Strength
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density ²	2.00	g/cm ³	ISO 1183
Water Absorption (24 hr, 73°F)	0.020	%	ASTM D570
Mold Shrinkage ³			
Flow	0.20	%	
Transverse	0.40	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	20300	psi	ISO 527
Tensile Elongation (Break)	1.0	%	ISO 527
Flexural Modulus	2.61E+6	psi	ISO 178
Flexural Strength	31900	psi	ISO 178
Compressive Strength	39900	psi	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	3.3	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength	10	ft·lb/in ²	ISO 179/1eU
Notched Izod Impact Strength	3.3	ft·lb/in ²	ISO 180/A
Unnotched Izod Impact Strength	9.5	ft·lb/in ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
CLTE - Flow			ISO 11359-2
-58 to 122°F	8.3E-6	in/in/°F	
212 to 392°F	8.3E-6	in/in/°F	
CLTE - Transverse			ISO 11359-2
-58 to 122°F	1.4E-5	in/in/°F	
212 to 392°F	3.6E-5	in/in/°F	
Thermal Conductivity	4.4	Btu·in/hr/ft ² /°F	ASTM E1530
Heat Deflection Temperature - 1.8 MPa	509	°F	ASTM D648
Temperature Index	428 to 464	°F	UL 746B
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	460	V/mil	ASTM D149

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Electrical	Nominal Value	Unit	Test Method
Dielectric Constant			ASTM D150
77°F, 1 kHz	5.20		
77°F, 1 MHz	5.00		
Dissipation Factor			ASTM D150
77°F, 1 kHz	2.0E-3		
77°F, 1 MHz	2.0E-3		
Arc Resistance	185	sec	ASTM D495
Comparative Tracking Index (CTI)	250	V	IEC 60112
Comparative Tracking Index (CTI)	PLC 2		UL 746A
Insulation Resistance - 95% RH, 48 hr (194°F)	1.00E+13	ohms	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	•	V-0	UL 94
	•	5VA	

Additional Information

Test specimen molding conditions: Stock temperature, 315-345°C; Mold temperature, 135°C

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	275 to 302	°F
Drying Time	2.0 to 4.0	hr
Rear Temperature	563 to 599	°F
Middle Temperature	581 to 617	°F
Front Temperature	599 to 653	°F
Nozzle Temperature	581 to 617	°F
Processing (Melt) Temp	608 to 626	°F
Mold Temperature	275 to 302	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method A

³ Measured on 102 mm x 102 mm x 3.2 mm plaques, edge gated.