

Ryton® R-7-232BL

Syensqo - Polyphenylene Sulfide

General Information

Product Description

Ryton® R-7-232BL glass fiber and mineral filled polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature environments.

Ryton R-7-232BL complies with United States Food and Drug Administration (FDA) and European Union food contact regulations.

General

Filler / Reinforcement	• Glass Fiber/Mineral
Features	• Good Strength
Uses	• Food Service Applications
Agency Ratings	• EU Food Contact ¹ • FDA Food Contact ¹ • NSF STD-51
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Properties ²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.98		ASTM D792
Molding Shrinkage - Flow (0.126 in)	1.8E-3	in/in	
Molding Shrinkage - Across Flow (0.126 in)	5.9E-3	in/in	
Water Absorption (24 hr, 73°F)	8.0E-3	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3.10E+6	psi	ISO 527-1
Tensile Stress	21800	psi	ISO 527-2
Tensile Strain (Break)	0.90	%	ISO 527-2
Flexural Modulus	3.02E+6	psi	ISO 178
Flexural Stress	33400	psi	ISO 178
Compressive Strength	38400	psi	ASTM D695
Poisson's Ratio	0.34		ISO 527
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	1.1	ft·lb/in	ASTM D256
Notched Izod Impact Strength			
--	4.8	ft·lb/in ²	ISO 180/A
-40°F	4.4	ft·lb/in ²	ISO 180
Unnotched Izod Impact (0.125 in)	5.4	ft·lb/in	ASTM D4812
Unnotched Izod Impact Strength	10	ft·lb/in ²	ISO 180
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	120		

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	504	°F	ASTM D648
Melting Temperature	545	°F	
CLTE - Flow			ASTM E831
-58 to 122°F	6.7E-6	in/in/°F	
122 to 212°F	7.2E-6	in/in/°F	
257 to 392°F	6.7E-6	in/in/°F	
CLTE - Transverse			ASTM E831
-58 to 122°F	1.4E-5	in/in/°F	
122 to 212°F	2.1E-5	in/in/°F	
212 to 392°F	4.2E-5	in/in/°F	
UL Temperature Rating	428 to 464	°F	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.2E+15	ohms	ASTM D257
Volume Resistivity	1.5E+16	ohms·cm	ASTM D257
Dielectric Strength	300	V/mil	ASTM D149
Dielectric Constant			ASTM D150
77°F, 1 kHz	4.24		
77°F, 1 MHz	4.20		
Dissipation Factor			ASTM D150
77°F, 1 kHz	2.0E-3		
77°F, 1 MHz	1.0E-3		
Arc Resistance	192	sec	ASTM D495
Comparative Tracking Index (CTI)	225	V	UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating	• •	V-0 5VA	UL 94

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 For specific clearances, please contact your Solvay representative.

² Typical properties: these are not to be construed as specifications.