Ryton® BR42B

Syensqo - Polyphenylene Sulfide

General Information

Product Description

Ryton® BR42B 40% glass fiber reinforced polyphenylene sulfide compound is specially formulated to provide low coefficient of friction and reduced wear rate for use in applications requiring low surface friction and/or wear.

General

Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight	
Features	• Low Friction	• Wear Resistant
Uses	• Electrical/Electronic Applications	
RoHS Compliance	• RoHS Compliant	
Appearance	• Natural Color	
Forms	• Pellets	
Processing Method	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.76		ASTM D792
Molding Shrinkage - Flow (0.126 in)	2.0E-3	in/in	
Molding Shrinkage - Across Flow (0.126 in)	5.0E-3	in/in	
Water Absorption (24 hr, 73°F)	0.020	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength	27000	psi	ASTM D638
Tensile Stress	26800	psi	ISO 527-2
Tensile Elongation (Break)	1.6	%	ASTM D638
Tensile Strain (Break)	1.6	%	ISO 527-2
Flexural Modulus	2.10E+6	psi	ASTM D790
Flexural Modulus	2.10E+6	psi	ISO 178
Flexural Strength	39000	psi	ASTM D790
Flexural Stress	38400	psi	ISO 178
Compressive Strength	37000	psi	ASTM D695
Poisson's Ratio	0.40		
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (0.125 in)	1.7	ft·lb/in	ASTM D256
Notched Izod Impact Strength	4.5	ft·lb/in²	ISO 180/A
Unnotched Izod Impact (0.125 in)	14	ft·lb/in	ASTM D4812
Unnotched Izod Impact Strength	19	ft·lb/in²	ISO 180
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	97		
R-Scale	117		

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	509	°F	
CLTE - Flow			ASTM E831
-58 to 122°F	8.3E-6	in/in/°F	
212 to 392°F	5.6E-6	in/in/°F	
CLTE - Transverse			ASTM E831
-58 to 122°F	2.2E-5	in/in/°F	
212 to 392°F	4.4E-5	in/in/°F	
Thermal Conductivity	2.3	Btu·in/hr/ft²/°F	
UL Temperature Rating	356	°F	UL 746B

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	550	V/mil	ASTM D149
Dielectric Constant			ASTM D150
77°F, 1 kHz	3.70		
77°F, 1 MHz	3.70		
Dissipation Factor			ASTM D150
77°F, 1 kHz	2.0E-3		
77°F, 1 MHz	3.0E-3		
Comparative Tracking Index (CTI)	150	V	UL 746A
Insulation Resistance [2] (194°F)	1.0E+11	ohms	

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	V-0		UL 94
Oxygen Index	48	%	ASTM D2863

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] 95%RH, 48 hr