Ryton® R-7-232NA

Syensqo - Polyphenylene Sulfide

General Information

Product Description

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

Ryton R-7-232NA 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	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [2]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.97		ASTM D792
Molding Shrinkage - Flow (0.126 in)	1.8E-3	in/in	
Molding Shrinkage - Across Flow (0.126 in)	5.7E-3	in/in	
Water Absorption (24 hr, 73°F)	0.013	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3.12E+6	psi	ISO 527-1
Tensile Stress	21800	psi	ISO 527-2
Tensile Strain (Break)	1.0	%	ISO 527-2
Flexural Modulus	2.97E+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)	1.2	ft·lb/in	ASTM D256
Notched Izod Impact Strength			
--	4.3	ft·lb/in²	ISO 180/A
-40°F	4.6	ft·lb/in²	ISO 180
Unnotched Izod Impact (0.125 in)	5.6	ft·lb/in	ASTM D4812
Unnotched Izod Impact Strength	9.5	ft·lb/in²	ISO 180
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	121		

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	504	°F	
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	
248 to 392°F	6.1E-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	
257 to 392°F	4.4E-5	in/in/°F	
Thermal Conductivity	2.2	Btu·in/hr/ft²/°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	330	V/mil	ASTM D149
Dielectric Constant			ASTM D150
77°F, 1 kHz	4.13		
77°F, 1 MHz	4.16		
Dissipation Factor			ASTM D150
77°F, 1 kHz	2.0E-3		
77°F, 1 MHz	4.0E-3		
Arc Resistance	190	sec	ASTM D495
Comparative Tracking Index (CTI)	225	V	UL 746A

Flammability		Nominal Value	Unit	Test Method
Flame Rating	•	V-0		UL 94
	•	5VA		

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.