Ryton® R-7-220BL

Polyphenylene Sulfide

Solvay Specialty Polymers

Message:

Ryton® R-7-220BL glass fiber and mineral filled polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature water.

General Information			
UL YellowCard	E95746-102108298		
Filler / Reinforcement	Glass\Mineral		
Features	Good Strength		
Uses	Automotive Applications		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.95	g/cm³	ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.40	%	
Water Absorption (23°C, 24 hr)	0.020	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	99		
R-Scale	116		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
--	152	MPa	ASTM D638
--	155	MPa	ISO 527-2
Tensile Elongation (Break)	1.0	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	19300	MPa	ASTM D790
--	19000	MPa	ISO 178
Flexural Strength			
--	234	MPa	ASTM D790
--	240	MPa	ISO 178
Compressive Strength	295	MPa	ASTM D695
Poisson's Ratio	0.35		ISO 527
Impact	**Nominal Value**	**Unit**	**Test Method**

Notched Izod Impact			
3.18 mm	69	J/m	ASTM D256
--	8.0	kJ/m^2	ISO 180/A
Unnotched Izod Impact			
3.18 mm	270	J/m	ASTM D4812
--	20	kJ/m^2	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	265	°C	ASTM D648
CLTE			ASTM E831
Flow : -50 to 50°C	1.5E-5	cm/cm/°C	
Flow : 100 to 200°C	1.0E-5	cm/cm/°C	
Transverse : -50 to 50°C	3.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	7.0E-5	cm/cm/°C	
Thermal Conductivity	0.51	W/m/K	
UL Temperature Rating	220 to 240	°C	UL 746B
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	5.00		
25°C, 1 MHz	4.90		
Dissipation Factor			ASTM D150
25°C, 1 kHz	0.020		
25°C, 1 MHz	0.010		
Arc Resistance	185	sec	ASTM D495
Comparative Tracking Index (CTI)	175	V	UL 746
Insulation Resistance [1] (90°C)	1.0E+11	ohms	
Flammability	**Nominal Value**	**Unit**	**Test Method**
	V-0		
Flame Rating (1.60 mm)	5VA		UL 94
Oxygen Index	62	%	ASTM D2863
Additional Information	**Nominal Value**	**Unit**	
Hydrolytic Stability [2]			
Tensile Strength Retained	> 75	%	
Weight Gain	< 1.0	%	
NOTE			
1.	95%RH, 48 hr		

2.	Test specimens aged 1000 hours in water at 140°C (284°F)

Recommended distributors for this material

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