

Ryton® R-4-240BL

Polyphenylene Sulfide

Solvay Specialty Polymers

Message:

Ryton® R-4-240NA and R-4-240BL 40% glass fiber reinforced polyphenylene sulfide compounds provide enhanced mechanical strength and toughness compared to other polyphenylene sulfide compounds.

General Information			
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Features	Good Strength		
	Good Toughness		
Uses	Automotive Under the Hood		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.66	g/cm ³	ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.50	%	
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	120		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
--	165	MPa	ASTM D638
--	175	MPa	ISO 527-2
Tensile Elongation (Break)	1.7	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	13800	MPa	ASTM D790
--	14000	MPa	ISO 178
Flexural Strength			
--	248	MPa	ASTM D790
--	255	MPa	ISO 178
Compressive Strength	265	MPa	ASTM D695
Poisson's Ratio	0.39		ISO 527

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
3.18 mm	85	J/m	ASTM D256
--	9.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact			
3.18 mm	640	J/m	ASTM D4812
--	40	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	2.0E-5	cm/cm/°C	
Flow : 100 to 200°C	1.5E-5	cm/cm/°C	
Transverse : -50 to 50°C	4.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	9.0E-5	cm/cm/°C	
Thermal Conductivity	0.31	W/m/K	
UL Temperature Rating	200 to 220	°C	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	22	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	3.90		
25°C, 1 MHz	4.00		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	2.0E-3		
Arc Resistance	130	sec	ASTM D495
Comparative Tracking Index (CTI)	150	V	UL 746
Insulation Resistance ¹ (90°C)	1.0E+12	ohms	
Flammability	Nominal Value	Unit	Test Method
	V-0		
Flame Rating (1.60 mm)	5VA		UL 94
Oxygen Index	54	%	ASTM D2863
NOTE			
1.	95%RH, 48 hr		

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