

Ryton® R-7-120BL

polyphenylene sulfide

Ryton® R-7-120NA and R-7-120BL glass fiber and mineral filled polyphenylene sulfide compounds provide good

strength and low maintenance molding using conventional molding equipment.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Latin America • Europe • North America
Filler / Reinforcement	• Glass/Mineral
Features	• Good Strength
Uses	• Automotive Applications
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• CHRYSLER MS-DB-570 CPN3243 Color: Black • FORD WSF-M4D803-A2 • GM GMP.PPS.002
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Typical Value	Unit	Test method
Specific Gravity	1.99		ASTM D792
Molding Shrinkage			
Flow : 0.126 in	2.0E-3	in/in	
Across Flow : 0.126 in	4.0E-3	in/in	
Water Absorption (73°F, 24 hr)	0.020	%	ASTM D570

Mechanical

	Typical Value	Unit	Test method
Tensile Strength			
--	18000	psi	ASTM D638
--	19600	psi	ISO 527-2
Tensile Elongation			
Break	0.90	%	ASTM D638
Break	0.80	%	ISO 527-2
Flexural Modulus			
--	2.80E+6	psi	ASTM D790
--	2.76E+6	psi	ISO 178
Flexural Strength			
--	30000	psi	ASTM D790
--	30500	psi	ISO 178
Compressive Strength	38400	psi	ASTM D695
Poisson's Ratio	0.36		ISO 527

Impact

	Typical Value	Unit	Test method
Notched Izod Impact			
0.125 in	1.0	ft·lb/in	ASTM D256
--	2.9	ft·lb/in ²	ISO 180/A

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Impact	Typical Value	Unit	Test method
Unnotched Izod Impact			
0.125 in	4.0	ft·lb/in	ASTM D4812
--	7.1	ft·lb/in ²	ISO 180

Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	118		

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	509	°F	
CLTE			ASTM E831
Flow : -58 to 122°F	8.3E-6	in/in/°F	
Flow : 212 to 392°F	8.3E-6	in/in/°F	
Transverse : -58 to 122°F	1.7E-5	in/in/°F	
Transverse : 212 to 392°F	3.9E-5	in/in/°F	
Thermal Conductivity	4.1	Btu·in/hr/ft ² /°F	
UL Temperature Rating	428 to 464	°F	UL 746B

Electrical	Typical Value	Unit	Test method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength	400	V/mil	ASTM D149
Dielectric Constant			ASTM D150
77°F, 1 kHz	4.90		
77°F, 1 MHz	4.90		
Dissipation Factor			ASTM D150
77°F, 1 kHz	4.0E-3		
77°F, 1 MHz	2.0E-3		
Arc Resistance	185	sec	ASTM D495
Comparative Tracking Index (CTI)	250	V	UL 746
Insulation Resistance ¹ (194°F)	1.0E+11	ohms	

Flammability	Typical Value	Unit	Test method
Flame Rating (0.06 in)	• •	V-0 5VA	UL 94
Oxygen Index	61	%	ASTM D2863

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Notes

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

¹ 95%RH, 48 hr

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