

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	<ul style="list-style-type: none"> • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass\Mineral
Features	• Good Strength
Uses	• Automotive Applications
RoHS Compliance	• RoHS Compliant
Automotive Specifications	<ul style="list-style-type: none"> • 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
Density / Specific Gravity	1.99		ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.40	%	
Water Absorption (24 hr, 23°C)	0.020	%	ASTM D570

Mechanical

	Typical Value	Unit	Test method
Tensile Strength			
--	124	MPa	ASTM D638
--	135	MPa	ISO 527-2
Tensile Elongation			
Break	0.90	%	ASTM D638
Break	0.80	%	ISO 527-2
Flexural Modulus			
--	19300	MPa	ASTM D790
--	19000	MPa	ISO 178
Flexural Strength			
--	207	MPa	ASTM D790
--	210	MPa	ISO 178
Compressive Strength	265	MPa	ASTM D695
Poisson's Ratio	0.36		ISO 527

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Impact		Typical Value	Unit	Test method
Notched Izod Impact				
3.18 mm		53	J/m	ASTM D256
--		6.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact				
3.18 mm		210	J/m	ASTM D4812
--		15	kJ/m 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
1.8 MPa, Unannealed		265	°C	
CLTE				ASTM E831
Flow : -50 to 50°C		1.5E-5	cm/cm/°C	
Flow : 100 to 200°C		1.5E-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		0.59	W/m/K	
UL Temperature Rating		220 to 240	°C	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		16	kV/mm	ASTM D149
Dielectric Constant				ASTM D150
25°C, 1 kHz		4.90		
25°C, 1 MHz		4.90		
Dissipation Factor				ASTM D150
25°C, 1 kHz		4.0E-3		
25°C, 1 MHz		2.0E-3		
Arc Resistance		185	sec	ASTM D495
Comparative Tracking Index (CTI)		250	V	UL 746
Insulation Resistance ¹ (90°C)		1.0E+11	ohms	
Flammability		Typical Value	Unit	Test method
Flame Rating (1.6 mm)	•	V-0		UL 94
	•	5VA		
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



www.solvay.com

SpecialtyPolymers.EMEA@solvay.com | Europe, Middle East and Africa

SpecialtyPolymers.Americas@solvay.com | Americas

SpecialtyPolymers.Asia@solvay.com | Asia and Australia

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