

Ryton® R-7-121NA

polyphenylene sulfide

Ryton® R-7-121NA and R-7-121BL glass fiber and mineral filled polyphenylene sulfide compounds provide good

mechanical strength with good flow 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	<ul style="list-style-type: none"> • Good Flow • Good Strength
Uses	• Automotive Applications
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.95		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			
--	131	MPa	ASTM D638
--	135	MPa	ISO 527-2
Tensile Elongation (Break)	1.0	%	ASTM D638 ISO 527-2
Flexural Modulus			
--	17200	MPa	ASTM D790
--	18000	MPa	ISO 178
Flexural Strength			
--	207	MPa	ASTM D790
--	210	MPa	ISO 178
Compressive Strength	285	MPa	ASTM D695
Poisson's Ratio	0.36		ISO 527

Impact

	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	59	J/m	ASTM D256
--	6.0	kJ/m²	ISO 180/A
Unnotched Izod Impact			
3.18 mm	210	J/m	ASTM D4812
--	16	kJ/m²	ISO 180

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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		0.58 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		18 kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz		4.80	
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



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