

# Ryton® R-7-121NA

## Syensqo - Polyphenylene Sulfide

### General Information

#### Product Description

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

Filler / Reinforcement	• Glass Fiber/Mineral
Features	• Good Flow • Good Strength
Uses	• Automotive Applications
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.95		ASTM D792
Molding Shrinkage - Flow (0.126 in)	2.0E-3	in/in	
Molding Shrinkage - Across Flow (0.126 in)	4.0E-3	in/in	
Water Absorption (24 hr, 73°F)	0.020	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	19000	psi	ASTM D638
Tensile Stress	19600	psi	ISO 527-2
Tensile Elongation (Break)	1.0	%	ASTM D638
Tensile Strain (Break)	1.0	%	ISO 527-2
Flexural Modulus	2.50E+6	psi	ASTM D790
Flexural Modulus	2.61E+6	psi	ISO 178
Flexural Strength	30000	psi	ASTM D790
Flexural Stress	30500	psi	ISO 178
Compressive Strength	41300	psi	ASTM D695
Poisson's Ratio	0.36		ISO 527
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	1.1	ft·lb/in	ASTM D256
Notched Izod Impact Strength	2.9	ft·lb/in <sup>2</sup>	ISO 180/A
Unnotched Izod Impact (0.125 in)	4.0	ft·lb/in	ASTM D4812
Unnotched Izod Impact Strength	7.6	ft·lb/in <sup>2</sup>	ISO 180
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	118		

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	509	°F	ASTM D648
CLTE - Flow -58 to 122°F 212 to 392°F	8.3E-6 8.3E-6	in/in/°F in/in/°F	ASTM E831
CLTE - Transverse -58 to 122°F 212 to 392°F	1.7E-5 3.9E-5	in/in/°F in/in/°F	ASTM E831
Thermal Conductivity	4.0	Btu·in/hr/ft²/°F	
UL Temperature Rating	428 to 464	°F	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	450	V/mil	ASTM D149
Dielectric Constant 77°F, 1 kHz 77°F, 1 MHz	4.80 4.90		ASTM D150
Dissipation Factor 77°F, 1 kHz 77°F, 1 MHz	4.0E-3 2.0E-3		ASTM D150
Arc Resistance	185	sec	ASTM D495
Comparative Tracking Index (CTI)	250	V	UL 746A
Insulation Resistance <sup>2</sup> (194°F)	1.0E+11	ohms	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	V-0 5VA		UL 94
Oxygen Index	61	%	ASTM D2863

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 95%RH, 48 hr