

# Ryton® R-4-200BL

Polyphenylene Sulfide

Syensqo

PROSPECTOR®

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## Technical Data

### Product Description

Ryton® R-4-200NA and R-4-200BL 40% glass fiber reinforced polyphenylene sulfide compounds provide enhanced mechanical strength and low maintenance molding using conventional molding equipment

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Technical Datasheet</a>
UL Yellow Card <sup>2</sup>	• <a href="#">E95746-102108309</a>
Search for UL Yellow Card	• <a href="#">Syensqo</a> • <a href="#">Ryton®</a>
Availability	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight
Features	• Good Strength
Uses	• Automotive Applications
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity	1.68 g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage		
Flow : 3.20 mm	0.20 %	
Across Flow : 3.20 mm	0.50 %	
Water Absorption (24 hr, 23°C)	0.020 %	ASTM D570

Mechanical	Nominal Value Unit	Test Method
Tensile Strength		
--	179 MPa	ASTM D638
--	185 MPa	ISO 527-2
Tensile Elongation (Break)	1.5 %	ASTM D638 ISO 527-2
Flexural Modulus		
--	14500 MPa	ASTM D790
--	14000 MPa	ISO 178
Flexural Strength		
--	255 MPa	ASTM D790
--	260 MPa	ISO 178
Compressive Strength	275 MPa	ASTM D695
Poisson's Ratio	0.40	ISO 527



Impact	Nominal Value Unit	Test Method
Notched Izod Impact		
3.18 mm	80 J/m	ASTM D256
--	8.0 kJ/m <sup>2</sup>	ISO 180/A
Unnotched Izod Impact		
3.18 mm	530 J/m	ASTM D4812
--	35 kJ/m <sup>2</sup>	ISO 180
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness		ASTM D785
M-Scale	100	
R-Scale	120	
Thermal	Nominal 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	1.0E-5 cm/cm/°C	
Transverse : -50 to 50°C	4.0E-5 cm/cm/°C	
Transverse : 100 to 200°C	8.5E-5 cm/cm/°C	
Thermal Conductivity	0.33 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	3.80	
Dissipation Factor		ASTM D150
25°C, 1 kHz	2.0E-3	
25°C, 1 MHz	2.0E-3	
Arc Resistance	125 sec	ASTM D495
Comparative Tracking Index (CTI)	PLC 4	UL 746A
Comparative Tracking Index	175 V	IEC 60112
Insulation Resistance <sup>4</sup> (90°C)	1.0E+11 ohms	
Flammability	Nominal Value Unit	Test Method
Flame Rating (1.6 mm)	V-0 5VA	UL 94
Oxygen Index	57 %	ASTM D2863

**Notes**

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

<sup>3</sup> Typical properties: these are not to be construed as specifications.

<sup>4</sup> 95%RH, 48 hr

