

Ryton® QA221N

polyphenylene sulfide

Ryton® QA221N (granular powder) unfilled polyphenylene sulfide exhibits excellent thermal stability and chemical resistance.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Chemical Resistant • Good Thermal Stability
Uses	• Compounding
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Powder
Processing Method	• Injection Molding

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.34		ASTM D792
Melt Mass-Flow Rate (MFR) ¹ (316°C/5.0 kg)	160	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	1.0	%	
Water Absorption (24 hr, 23°C)	0.050	%	ASTM D570
Ash Content	0.10	wt%	ISO 3451-1
Volatiles (150°C)	< 0.30	wt%	

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	3400	MPa	ISO 527-1
Tensile Stress	80.0	MPa	ISO 527-2
Tensile Strain (Break)	4.0	%	ISO 527-2
Flexural Modulus	3400	MPa	ISO 178
Flexural Stress	140	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	53	J/m	ASTM D256
--	4.0	kJ/m²	ISO 180/A

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Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	160	°C	
1.8 MPa, Unannealed	95.0	°C	
Glass Transition Temperature	90.0	°C	ISO 11357-2
Vicat Softening Temperature	> 180	°C	ISO 306
Melting Temperature	280	°C	ISO 11357-3
CLTE – Flow			ASTM E831
-50 to 50°C	5.0E-5	cm/cm/°C	
100 to 200°C	1.2E-4	cm/cm/°C	
Thermal Conductivity	0.29	W/m/k	

Electrical	Typical Value	Unit	Test method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	24	kV/mm	ASTM D149
Dielectric Constant (25°C, 1 MHz)	3.20		ASTM D150
Dissipation Factor (25°C, 1 MHz)	2.0E-3		ASTM D150

Flammability	Typical Value	Unit	Test method
Flame Rating (1.6 mm, Tested by CP Chemical)	V-0		UL 94
Oxygen Index	44	%	ASTM D2863

Notes

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

¹ Procedure B



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