

Ryton® QA221N

Syensqo - Polyphenylene Sulfide

General Information

Product Description

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

General

Features	<ul style="list-style-type: none"> • Chemical Resistant • Good Thermal Stability
Uses	<ul style="list-style-type: none"> • Compounding
RoHS Compliance	<ul style="list-style-type: none"> • RoHS Compliant
Appearance	<ul style="list-style-type: none"> • Natural Color
Forms	<ul style="list-style-type: none"> • Powder
Processing Method	<ul style="list-style-type: none"> • Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.34		ASTM D792
Melt Mass-Flow Rate (MFR) ² (316°C/5.0 kg)	160	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.126 in)	0.010	in/in	
Water Absorption (24 hr, 73°F)	0.050	%	ASTM D570
Ash Content	0.10	wt%	ISO 3451-1
Volatiles (302°F)	< 0.30	wt%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	493000	psi	ISO 527-1
Tensile Stress	11600	psi	ISO 527-2
Tensile Strain (Break)	4.0	%	ISO 527-2
Flexural Modulus	493000	psi	ISO 178
Flexural Stress	20300	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	1.0	ft-lb/in	ASTM D256
Notched Izod Impact Strength	1.9	ft-lb/in ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	320	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	203	°F	ASTM D648
Glass Transition Temperature	194	°F	ISO 11357-2
Vicat Softening Temperature	> 356	°F	ISO 306
Melting Temperature	536	°F	ISO 11357-3
CLTE - Flow			ASTM E831
-58 to 122°F	2.8E-5	in/in/°F	
212 to 392°F	6.4E-5	in/in/°F	
Thermal Conductivity	2.0	Btu-in/hr/ft ² /°F	
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	600	V/mil	ASTM D149

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Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (77°F, 1 MHz)	3.20		ASTM D150
Dissipation Factor (77°F, 1 MHz)	2.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, Tested by CP Chemical)	V-0		UL 94
Oxygen Index	44	%	ASTM D2863

Notes

¹ Typical properties: these are not to be construed as specifications.

² Procedure B