Ryton® R-4-222NA

Polyphenylene Sulfide

Solvay Specialty Polymers

Message:

Ryton® R-4-222NA 40% glass fiber reinforced polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature water and complies with United States Food and Drug Administration (FDA) and European Union (EU 10/2011 and 1183/2012) regulations for use as a component of articles intended for repeat use in contact with all types of foods.

General Information			
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Features	Food Contact Acceptable Good Strength		
Uses	Appliance Components		
Agency Ratings	EU 10/2011 FDA Food Contact, Unspecified Rating		
RoHS Compliance	RoHS Compliant		
Appearance	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.68	g/cm³	ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.50	%	
Water Absorption (23°C, 24 hr)	0.020	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	103		
R-Scale	122		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
--	186	MPa	ASTM D638
--	190	MPa	ISO 527-2
Tensile Elongation (Break)	1.6	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	14500	MPa	ASTM D790
--	14000	MPa	ISO 178
Flexural Strength			
--	269	MPa	ASTM D790

--	275	MPa	ISO 178
Compressive Strength	275	MPa	ASTM D695
Poisson's Ratio	0.37		ISO 527
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
3.18 mm	91	J/m	ASTM D256
--	9.0	kJ/m^2	ISO 180/A
Unnotched Izod Impact			
3.18 mm	640	J/m	ASTM D4812
--	35	kJ/m^2	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	265	°C	ASTM D648
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	4.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	8.5E-5	cm/cm/°C	
Thermal Conductivity	0.31	W/m/K	
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	3.80		
25°C, 1 MHz	3.80		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	3.0E-3		
Arc Resistance	125	sec	ASTM D495
Comparative Tracking Index (CTI)	150	V	UL 746
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.60 mm, Tested by CP Chemical)	V-0		UL 94
Oxygen Index	45	%	ASTM D2863
Additional Information	**Nominal Value**	**Unit**	
Hydrolytic Stability [1]			
Tensile Strength Retained	> 80	%	
Weight Gain	< 1.0	%	
NOTE			
1.	Test specimens aged 1000 hours in water at 140°C (284°F)		

Recommended distributors for this material

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