

Rilsan® CLEAR G 170

Polyamide 11

Arkema

Message:

Rilsan ® Clear G 170 is a high performance transparent polyamide with outstanding thermal resistance. This grade has been designed for extrusion and injection molding applications.

MAIN APPLICATIONS

Coffee machine.

Fuel filter container.

Inner layer of fiber optic and copper telephone cables resistant to rodents.

Power cables resistant to rodents.

General Information			
UL YellowCard	E45228-101927616		
Features	Good Thermal Stability		
Uses	Cable Jacketing		
	Containers		
	Optical Applications		
Appearance	Clear/Transparent		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	ISO 1183
Molding Shrinkage			Internal Method
Across Flow : 40°C, 24 hr, 2.00 mm	0.72	%	
Flow : 40°C, 24 hr, 2.00 mm	0.69	%	
Water Absorption			ISO 62
23°C, 24 hr	3.8	%	
Equilibrium, 23°C, 50% RH	1.7	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D	84		
Shore D, 15 sec	79		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2020	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	74.0	MPa	
Break	58.0	MPa	
Tensile Strain			ISO 527-2
Yield	9.0	%	

Break	> 100	%	
Flexural Modulus	1980	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C	13	kJ/m ²	
23°C	13	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	150	°C	ISO 75-2/B
1.8 MPa, Unannealed	136	°C	ISO 75-2/A
Glass Transition Temperature	168	°C	ISO 11357-2
Optical	Nominal Value	Unit	Test Method
Transmittance (2000 μm, 560 nm)	90.8	%	ASTM D1003
Refractive Index	1.5380		ISO 489
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	4.0 to 6.0	hr	
Processing (Melt) Temp	270 to 310	°C	
Mold Temperature	40.0 to 80.0	°C	
Extrusion	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	4.0 to 6.0	hr	
Melt Temperature	270 to 290	°C	

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