

Rilsan® CLEAR G 830 Rnew

Polyamide Copolymer

Arkema

Message:

Rilsan ® Clear G 830 Rnew is a high performance transparent copolyamide, partially based on renewable resources. This grade has been specially designed for injection molding applications, ideally suited for optic as high end eyewear frames.

MAIN APPLICATIONS

Sun, optical, reading glass frames.

Glass filled compound for structural parts of smart phone (GF 30%-50%).

Headphone frames.

General Information			
UL YellowCard	E45228-101388009		
Features	Renewable Resource Content		
Uses	Optical Applications		
Appearance	Clear/Transparent		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.01	g/cm ³	ISO 1183
Molding Shrinkage			Internal Method
Across Flow : 40°C, 24 hr, 4.00 mm	0.51	%	
Flow : 40°C, 24 hr, 4.00 mm	0.46	%	
Water Absorption			ISO 62
23°C, 24 hr	3.3	%	
Equilibrium, 23°C, 50% RH	1.3	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D	83		
Shore D, 15 sec	81		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1690	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	55.0	MPa	
Break	60.0	MPa	
Tensile Strain			ISO 527-2
Yield	7.0	%	
Break	> 150	%	
Flexural Modulus	1530	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C	10	kJ/m ²	
23°C	11	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	110	°C	ISO 75-2/B
1.8 MPa, Unannealed	95.0	°C	ISO 75-2/A
Glass Transition Temperature	135	°C	ISO 11357-2
Optical	Nominal Value	Unit	Test Method
Transmittance (2000 μm, 560 nm)	91.5	%	ASTM D1003
Additional Information	Nominal Value	Unit	Test Method
Renewable Carbon Content	53 to 55	%	ASTM D6866
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	4.0 to 6.0	hr	
Processing (Melt) Temp	250 to 300	°C	
Mold Temperature	20.0 to 80.0	°C	

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