

RIALENE® P 100 SGF40 ST F V-0 natural

Polypropylene

RIA-Polymers GmbH

Message:

RIALENE P 100 SGF40 ST F V-0 natural is a semi-crystalline thermoplastic construction material based on polypropylene (PP), reinforced with 40 % special glass fiber (SGF) which is optimized linked to the polymer matrix.

RIALENE P 100 SGF40 ST F V-0 natural will be processed by injection molding and has halogen- and heavy metal-free fire protection equipment.

RIALENE P 100 SGF40 ST F V-0 natural is characterized by the following properties:

UL 94 V-0 listed at 1.5 mm

Conform to GWIT 825 °C at 1.5 mm

excellent rigidity and strength with good elongation behavior

excellent thermo-mechanical properties

halogen- and heavy metal-free flame retardants (conform to WEEE and RoHS)

very low smoke density

no corrosion during processing

General Information			
UL YellowCard	E257171-101026978		
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Additive	Flame retardancy		
Features	Semicrystallization		
	Rigidity, high		
	High strength		
	Halogen-free		
	Flame retardancy		
Agency Ratings	EU 2002/96/EC (WEEE)		
RoHS Compliance	RoHS compliance		
Appearance	Natural color		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PP SGF40		
Physical	Nominal Value	Unit	Test Method
Density	1.45	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	3.00	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.20 - 0.30	%	ISO 294-4
Flow direction	0.10 - 0.20	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12100	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/5
Yield	109	MPa	ISO 527-2/5
Fracture	107	MPa	ISO 527-2/5
Tensile Strain			ISO 527-2/5

Yield	2.9	%	ISO 527-2/5
Fracture	3.0	%	ISO 527-2/5
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	12	kJ/m ²	ISO 179/1eA
23°C	12	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	42	kJ/m ²	ISO 179/1eU
23°C	43	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	160	°C	ISO 75-2/B
1.8 MPa, not annealed	154	°C	ISO 75-2/A
Vicat Softening Temperature	150	°C	ISO 306/B50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+17	ohms · cm	IEC 60093
Dielectric Strength	41	kV/mm	IEC 60243-1
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	V-2		UL 94
1.50 mm	V-0		UL 94
3.00 mm	V-0		UL 94
Glow Wire Flammability Index (1.50 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.50 mm)	825	°C	IEC 60695-2-13
Additional Information			
Mechanical values determined after storage > 16 h at standard conditioning atmosphere (23 °C / 50 % rel. h.)			
Injection	Nominal Value	Unit	
Drying Temperature	95.0	°C	
Drying Time	3.0	hr	
Suggested Max Moisture	0.030	%	
Hopper Temperature	50.0 - 70.0	°C	
Rear Temperature	220 - 230	°C	
Middle Temperature	220 - 240	°C	
Front Temperature	220 - 250	°C	
Nozzle Temperature	220 - 250	°C	
Processing (Melt) Temp	220 - 250	°C	
Mold Temperature	40.0 - 60.0	°C	
Injection Rate	Slow-Moderate		
Back Pressure	0.500 - 5.00	MPa	

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