

Radilon® S RV500K 333 BK

Radici Group High Performance Polymers - Polyamide 6

General Information

Product Description

PA6 50% glass fibre reinforced injection moulding grade. Heat stabilized. Black colour.

Suitable for parts requiring very high stiffness and high mechanical resistance, as in case of metal replacement applications. Good resistance to thermal ageing.

General

Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Aging Resistant • Heat Stabilized • High Stiffness
Agency Ratings	• EU 2011/65/EC
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6-GF50

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	4.8	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.4	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.39E+6	1.60E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	31200	23200	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.7	3.5	%	ISO 527-2/1A/5
Flexural Modulus ²	2.10E+6	1.45E+6	psi	ISO 178
Flexural Stress ²	48600	39200	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	5.7	--	ft·lb/in ²	
73°F	7.1	12	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	43	--	ft·lb/in ²	
73°F	45	50	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	419	--	°F	

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	410	--	°F	ISO 75-2/Af
Vicat Softening Temperature	419	--	°F	ISO 306/B50
Melting Temperature ³	428	--	°F	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity (500 V)	1.0E+12	1.0E+10	ohms	IEC 62631-3-2
Volume Resistivity (500 V)	1.0E+13	1.0E+11	ohms·m	IEC 62631-3-1
Comparative Tracking Index Solution A	550	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.118 in)	0.0	--	in/min	ISO 3795
Flame Rating (0.031 in)	HB	--		UL 94
Glow Wire Flammability Index 0.08 in	1290	--	°F	IEC 60695-2-12

Processing Information

Injection	Dry	Unit
Drying Temperature - Desiccant Dryer	176	°F
Drying Time - Desiccant Dryer	2.0 to 4.0	hr
Dew Point - Desiccant Dryer	< -4	°F
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	464 to 536	°F
Mold Temperature	176 to 194	°F
Injection Rate	Moderate-Fast	

Notes

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

² 0.079 in/min

³ 10°C/min