

Radilon® A RV500K 333 BK

Radici Group High Performance Polymers - Polyamide 66

General Information

Product Description

PA66 50% glass fiber 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
Uses	• Automotive Applications • Metal Replacement
Agency Ratings	• EU 2011/65/EC
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA66-T GF50

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm ³	ISO 1183
Molding Shrinkage ²				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.30	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	4.6	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.1	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.32E+6	2.03E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	31200	25400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.7	3.0	%	ISO 527-2/1A/5
Flexural Modulus ³	2.10E+6	1.81E+6	psi	ISO 178
Flexural Stress ³	47100	40600	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
73°F	6.2	7.6	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
73°F	43	50	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	491	--	°F	
Deflection Temperature Under Load				ISO 75-2/Af
264 psi, Unannealed	473	--	°F	

Radilon® A RV500K 333 BK Radici Group High Performance Polymers - Polyamide 66

Thermal	Dry	Conditioned	Unit	Test Method
Vicat Softening Temperature	482	--	°F	ISO 306/B50
Melting Temperature ⁴	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	8.3E-6	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.7E-5	--	in/in/°F	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity ⁵	1.0E+12	1.0E+10	ohms	IEC 62631-3-2
Volume Resistivity ⁵	1.0E+15	1.0E+13	ohms·cm	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	554 to 581	°F
Mold Temperature	176 to 212	°F
Injection Rate	Moderate-Fast	

Notes

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

² 300°C Melt Temperature/ 90°C Mold Temperature/ 60 MPa Cavity Pressure

³ 0.079 in/min

⁴ 10°C/min

⁵ 500V