

# Radilon® A RV500RW 339 BK

## Radici Group High Performance Polymers - Polyamide 66

### General Information

#### Product Description

PA66 50% glass fiber reinforced injection moulding grade. Heat stabilized. Deep black colour.

Suitable for technical parts requiring very high stiffness and high mechanical resistance. Excellent heat ageing properties retention, improved welding lines strength. Especially fit for demanding metal replacement applications.

#### 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-GF50

### Properties <sup>1</sup>

Physical	Dry	Conditioned	Unit	Test Method
Density	1.59	--	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR)				ISO 1133
275°C/5.0 kg	8.2	--	g/10 min	
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	4.0	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.1	--	%	
Viscosity Index - Sulfuric Acid	4210	--	in <sup>3</sup> /lb	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.47E+6	2.07E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	34800	27600	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.9	3.1	%	ISO 527-2/1A/5
Flexural Modulus <sup>2</sup>	2.28E+6	2.23E+6	psi	ISO 178
Flexural Stress <sup>2</sup>	53700	44200	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	8.1	--	ft·lb/in <sup>2</sup>	
73°F	9.5	12	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	49	--	ft·lb/in <sup>2</sup>	
73°F	48	53	ft·lb/in <sup>2</sup>	

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<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load 66 psi, Unannealed	491	--	°F	ISO 75-2/Bf
Deflection Temperature Under Load 264 psi, Unannealed	482	--	°F	ISO 75-2/Af
Deflection Temperature Under Load 1160 psi, Unannealed	419	--	°F	ISO 75-2/Cf
Vicat Softening Temperature	491	--	°F	ISO 306/B50
Melting Temperature <sup>3</sup>	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
Thermal Conductivity <sup>4</sup> (73°F)	2.6	--	Btu·in/hr/ft <sup>2</sup> /°F	
<b>Electrical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
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
Electric Strength	14000	--	V/mil	IEC 60243-1
<b>Flammability</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (0.031 in)	HB	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.04 in	1290	--	°F	
0.08 in	1290	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.04 in	1340	--	°F	
0.08 in	1340	--	°F	

**Processing Information**

<b>Injection</b>	<b>Dry</b>	<b>Unit</b>
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	536 to 590	°F
Mold Temperature	176 to 212	°F
Injection Rate	Fast	

**Notes**

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 0.079 in/min

<sup>3</sup> 10°C/min

<sup>4</sup> in plane