

# Radiflam® S RV100 FR 322 BK

## Radici Group High Performance Polymers - Polyamide 6

### General Information

#### Product Description

PA6 flame retardant injection moulding grade, halogen and phosphorus free. Glass fiber reinforced. Black colour.

Environmentally friendly flame retardant grade with low toxicity and minimum smoke density during combustion. Rated V-0 according to UL-94. Improved thermal conductivity.

#### General

Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight		
Additive	• Flame Retardant		
Features	• Environmentally Sound/Sustainable • Flame Retardant	• Halogen Free • Low (to None) Phosphorus Content	• Low Toxicity • Thermally Conductive
Agency Ratings	• EU 2011/65/EC		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6-GF10 FR(61+72)		

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

Physical	Dry	Conditioned	Unit	Test Method
Density	1.72	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.40	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	2.8	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.4	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.84E+6	1.09E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	17400	12300	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.8	2.5	%	ISO 527-2/1A/5
Flexural Modulus <sup>2</sup>	1.86E+6	1.04E+6	psi	ISO 178
Flexural Stress <sup>2</sup>	27600	18100	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	1.7	--	ft·lb/in <sup>2</sup>	
73°F	1.9	2.4	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	9.5	--	ft·lb/in <sup>2</sup>	
73°F	13	17	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	423	--	°F	ISO 75-2/Bf
Deflection Temperature Under Load 264 psi, Unannealed	392	--	°F	ISO 75-2/Af
Vicat Softening Temperature	414	--	°F	ISO 306/B50
Melting Temperature <sup>3</sup>	428	--	°F	ISO 11357-3
Thermal Conductivity <sup>4</sup> (73°F)	6.9	--	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
Comparative Tracking Index Solution A	600	--	V	IEC 60112
<b>Flammability</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Burning Rate (0.118 in)	0.0	--	in/min	ISO 3795
Flame Rating 0.031 in 0.06 in	V-2 V-0	-- --		UL 94
Glow Wire Flammability Index 0.04 in 0.08 in	1760 1760	-- --	°F °F	IEC 60695-2-12
Glow Wire Ignition Temperature 0.04 in 0.08 in	1340 1340	-- --	°F °F	IEC 60695-2-13
Oxygen Index	58	--	%	ISO 4589-2

**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 572	°F
Mold Temperature	176 to 194	°F
Injection Rate	Moderate-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> Inplane