

Radiflam® S RV300 HF 333 BK

Radici Group High Performance Polymers - Polyamide 6

General Information

Product Description

PA6 flame retardant injection moulding grade, halogen and phosphorus free. 30% glass fiber reinforced and heat stabilized. Black colour.

Suitable for parts requiring fire retardancy along with high stiffness and good mechanical resistance. Good electrical insulating properties. Rated V-0 according to UL-94.

General

Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Additive	• Flame Retardant • Heat Stabilizer
Features	• Electrically Insulating • Halogen Free • High Stiffness • Flame Retardant • Heat Stabilized • Low (to None) Phosphorus Content
Agency Ratings	• EU 2011/65/EC
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6-GF30 FR(40)

Properties¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.42	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.60	--	%	
Flow	0.30	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	4.9	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.52E+6	1.04E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	20300	13100	psi	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	4.5	%	ISO 527-2/1A/5
Flexural Modulus ²	1.45E+6	914000	psi	ISO 178
Flexural Stress ²	31200	20300	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
73°F	5.7	7.1	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
73°F	33	40	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Af
264 psi, Unannealed	392	--	°F	
Vicat Softening Temperature	410	--	°F	ISO 306/B50
Melting Temperature ³	428	--	°F	ISO 11357-3

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Thermal	Dry	Conditioned	Unit	Test Method
CLTE - Flow (73 to 131°F)	1.2E-5	--	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 (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	1100	1100	V/mil	IEC 60243-1
Comparative Tracking Index Solution A	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.118 in)	0.0	--	in/min	ISO 3795
Flame Rating				UL 94
0.016 in	V-0	--		
0.031 in	V-0	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.04 in	1760	--	°F	
0.08 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.04 in	1340	--	°F	
0.08 in	1430	--	°F	

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	0.10 %
Processing (Melt) Temp	482 to 536 °F
Mold Temperature	176 to 212 °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