

Radilon® NeXTreme RV500HHR 3800 BK

Radici Group High Performance Polymers - *Polyamide*

General Information

Product Description

High Temperature polyamide injection molding grade, 50% glass fibre reinforced. Superior thermal resistance in contact with hot air. Black colour.

Suitable for demanding mechanical applications in very severe temperature conditions, where the parts must endure long term contact with hot air until 220-230°C. Very good properties retention after ageing. Typical applications in automotive are under bonnet components, like turbo air ducts, intercooler end caps. This material can be processed with water conditioned tools.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight		
Features	• Good Heat Resistance	• Heat Aging Resistant	
Uses	• Automotive Applications	• Automotive Under the Hood	
Agency Ratings	• EU 2011/65/EC		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA*-GF50		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.55	--	g/cm ³	ISO 1183
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.59E+6	--	psi	ISO 527-1/1A/1
Tensile Stress (Break)	33800	--	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.7	--	%	ISO 527-2/1A/5
Flexural Modulus ²	2.20E+6	--	psi	ISO 178
Flexural Stress ²	51900	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	8.6	--	ft·lb/in ²	
73°F	9.5	--	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	52	--	ft·lb/in ²	
73°F	48	--	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	500	--	°F	ISO 75-2/Bf
Melting Temperature ³	563	--	°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
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

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	581 to 599 °F
Mold Temperature	194 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

