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

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/cm³	ISO 1183
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.2	--	%	
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/in²	
73°F	9.5	--	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	52	--	ft·lb/in²	
73°F	48	--	ft·lb/in²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	500	--	°F	
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

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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