

Radilon® D RV300RG 3900 BK

Radici Group High Performance Polymers - Polyamide 610

General Information

Product Description

PA610 30% glass fiber reinforced injection moulding grade. Heat stabilized, very high hydrolysis resistance. Black colour.

Suitable for parts requiring good dimensional stability and mechanical resistance. Excellent retention of properties in contact with automotive cooling circuit liquids. This grade is partially renewably-sourced (64% of base polymer by weight).

General

Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Additive	• Heat Stabilizer
Features	• Good Dimensional Stability • Hydrolysis Resistant • Heat Stabilized • Renewable Resource Content
Uses	• Automotive Applications
Agency Ratings	• EU 2011/65/EC
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA610-GF30

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.31	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.80	--	%	
Flow	0.40	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	2.2	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.0	--	%	
Biobased Carbon Content	64	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.23E+6	986000	psi	ISO 527-1/1A/1
Tensile Stress (Break)	21800	17400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	5.0	6.0	%	ISO 527-2/1A/5
Flexural Modulus ²	1.10E+6	856000	psi	ISO 178
Flexural Stress ²	34800	27600	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	5.7	--	ft·lb/in ²	
73°F	7.1	8.1	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	50	--	ft·lb/in ²	
73°F	48	50	ft·lb/in ²	

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	392	--	°F	ISO 75-2/Af
Melting Temperature ³	428	--	°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
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	0.10	%
Processing (Melt) Temp	464 to 500	°F
Mold Temperature	176 to 194	°F
Injection Rate	Fast	

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.079 in/min

³ 10°C/min