Radilon® A CF300K 333 BK

Radici Group High Performance Polymers - Polyamide 66

General Information

Product Description

PA66 30% carbon fiber reinforced injection moulding grade. Heat stabilized. Black colour.

Suitable for parts and components requiring very high mechanical properties: stiffness, dimensional stability, fatigue and creep resistance. The presence of carbon fibers also provides higher electrical and thermal conductivity.

General			
Filler / Reinforcement	• Carbon Fiber, 30% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Creep Resistant • Electrically Conductive • Fatigue Resistant	• Heat Stabilized • High Dimensional Stability • High Stiffness	• Thermally Conductive
Agency Ratings	• EU 2011/65/EC		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA66-CF30		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.27	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.40	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	6.0	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.7	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	3.41E+6	2.10E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	36300	23200	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.2	2.5	%	ISO 527-2/1A/5
Flexural Modulus [2]	2.87E+6	--	psi	ISO 178
Flexural Stress [2]	53700	--	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	2.4	--	ft·lb/in²	
73°F	3.3	4.3	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	29	--	ft·lb/in²	
73°F	31	40	ft·lb/in²	

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	482	--	°F	
Deflection Temperature Under Load				ISO 75-2/Af
264 psi, Unannealed	455	--	°F	
Vicat Softening Temperature	464	--	°F	ISO 306/B50
Melting Temperature [3]	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	7.8E-6	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	5.3E-5	--	in/in/°F	ISO 11359-2
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity (500 V)	1.0E+3	1.0E+3	ohms	IEC 62631-3-2
Volume Resistivity (500 V)	1.0E+2	1.0E+2	ohms·m	IEC 62631-3-1
Comparative Tracking Index				IEC 60112
Solution A	150	--	V	
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate (0.118 in)	< 0.39	--	in/min	ISO 3795
Flame Rating (0.031 in)	HB	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.08 in	1290	--	°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	0.15	%
Processing (Melt) Temp	536 to 572	°F
Mold Temperature	176 to 212	°F
Injection Rate	Moderate	

Notes

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

[2] 0.079 in/min

[3] 10°C/min