

# Radilon® DT RV500RKC2 306 BK

## Radici Group High Performance Polymers - Polyamide 612

### General Information

#### Product Description

PA612, 50% glass fiber reinforced injection moulding grade. Heat stabilized, improved flowability. Black colour.

Suitable for parts requiring very high stiffness and high mechanical resistance in direct contact with drinking water and food. Excellent dimensional stability, improved hydrolytic stability and chemical resistance to disinfectants up to 60°C. Product developed for applications in civil and industrial water management as well as appliances.

#### General

Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Chemical Resistant • Good Flow	• Heat Stabilized • High Dimensional Stability	• High Stiffness • Hydrolytically Stable
Uses	• Appliances • Potable Water Applications		
Agency Ratings	• EU 10/2011	• EU 2011/65/EC	• FDA 21 CFR 177.1500 Chapter 1
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA612-GF50		

### Properties<sup>1</sup>

Physical	Dry	Conditioned	Unit	Test Method
Density	1.51	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.60	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	1.5	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	0.60	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.16E+6	1.94E+6	psi	ISO 527-1/1A/1
Tensile Stress (Break)	28300	24700	psi	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	3.2	%	ISO 527-2/1A/5
Flexural Modulus <sup>2</sup>	2.00E+6	1.73E+6	psi	ISO 178
Flexural Stress <sup>2</sup>	42800	38400	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	6.7	--	ft·lb/in <sup>2</sup>	
73°F	7.1	8.1	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	38	--	ft·lb/in <sup>2</sup>	
73°F	43	45	ft·lb/in <sup>2</sup>	

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<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load 264 psi, Unannealed	392	--	°F	ISO 75-2/Af
Melting Temperature <sup>3</sup>	428	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	1.1E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.8E-5	--	in/in/°F	ISO 11359-2
<b>Electrical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
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
<b>Flammability</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Burning Rate (0.118 in)	0.0	--	in/min	ISO 3795
Flame Rating (0.031 in)	HB	--		UL 94

**Processing Information**

<b>Injection</b>	<b>Dry</b>	<b>Unit</b>
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	500 to 554	°F
Mold Temperature	176 to 194	°F
Injection Rate	Moderate	

**Notes**

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 0.079 in/min

<sup>3</sup> 10°C/min