

Radici Radiflam A FR 100 NT

PA66 flame retardant, injection molding grade. Halogen and phosphorus free. Natural color.
Information provided by Radici Group.

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in ³	ISO 1183
Water Absorption	7.7 % @Thickness 2.00 mm	7.7 % @Thickness 0.0787 in	Immersion @ 23°C; ISO 62
Moisture Absorption	1.80 % @Thickness 2.00 mm, Temperature 23.0 °C	1.80 % @Thickness 0.0787 in, Temperature 73.4 °F	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.011 cm/cm	0.011 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 MPa	7250 psi	50mm/min. Conditioned; ISO 527-2/1A
	77.0 MPa	11200 psi	50mm/min. DAM; ISO 527-2/1A
Elongation at Break	12 %	12 %	50 mm / min. Nominal. DAM; ISO 527-2/1A
	>= 50 %	>= 50 %	50 mm / min. Nominal. Conditioned; ISO 527-2/1A
Tensile Modulus	2.60 GPa	377 ksi	1mm / min. Conditioned; ISO 527-2/1A
	3.45 GPa	500 ksi	1mm / min. DAM; ISO 527-2/1A
Flexural Strength	115 MPa	16700 psi	2mm / min. DAM; ISO 178
Flexural Modulus	3.20 GPa	464 ksi	2mm / min. DAM; ISO 178
Charpy Impact Unnotched	7.50 J/cm ² @Temperature 23.0 °C	35.7 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1e/U
	12.0 J/cm ² @Temperature 23.0 °C	57.1 ft-lb/in ² @Temperature 73.4 °F	Conditioned; ISO 179/1e/U
Charpy Impact, Notched	0.400 J/cm ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	Conditioned; ISO 179/1e/A
	0.450 J/cm ² @Temperature 23.0 °C	2.14 ft-lb/in ² @Temperature 73.4 °F	Conditioned; ISO 179/1e/A
	0.650 J/cm ² @Temperature 23.0 °C	3.09 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1e/A

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	Conditioned. 500V; IEC 60093

	1.00e+13 ohm-cm	1.00e+13 ohm-cm	DAM; 500V.; IEC 60093
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	Conditioned. 500V; IEC 60093
	1.00e+12 ohm	1.00e+12 ohm	DAM; 500V.; IEC 60093
Dielectric Strength	26.0 kV/mm	660 kV/in	Conditioned; IEC 60243-1
	31.0 kV/mm	787 kV/in	DAM; IEC 60243-1
Comparative Tracking Index	600 V	600 V	DAM. Sol.A; IEC 60112

Thermal Properties	Metric	English	Comments
Melting Point	260 °C	500 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	200 °C	392 °F	ISO 75/2Bf
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	ISO 75/2Af
Vicat Softening Point	220 °C @Load 5.10 kg	428 °F @Load 11.2 lb	50°C/h; ISO 306
Flammability, UL94	V-0 @Thickness 0.800 mm	V-0 @Thickness 0.0315 in	
	V-0 @Thickness 0.400 mm	V-0 @Thickness 0.0157 in	
Flame Spread	0.000 mm/min @Thickness 3.00 mm	0.000 in/min @Thickness 0.118 in	Automotive Interior; ISO 3795
Smoke Density	35 @Thickness 1.00 mm	35 @Thickness 0.0394 in	Ds max. 25kW/m2 w/ pilot flame; EN ISO 5659-2
Oxygen Index	35 %	35 %	ISO 4589-2
Glow Wire Ignition Temperature	>= 750 °C @Thickness 2.00 mm	>= 1380 °F @Thickness 0.0787 in	IEC 60695-2-1/3
	>= 775 °C @Thickness 1.00 mm	>= 1430 °F @Thickness 0.0394 in	IEC 60695-2-1/3
Glow Wire Flammability Index	960 °C @Thickness 1.00 mm	1760 °F @Thickness 0.0394 in	IEC 60695-2-1/2
	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	IEC 60695-2-1/2

Processing Properties	Metric	English	Comments
Processing Temperature	270 - 290 °C	518 - 554 °F	Extrusion Temperature

Melt Temperature	270 - 290 °C	518 - 554 °F	Injection Molding
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
Aging Temperature	121 °C @Time 7.20e+7 sec	250 °F @Time 20000 hour	TI @ 50% loss of Tensile Strength; ISO 2578
	134 °C @Time 7.20e+7 sec	273 °F @Time 20000 hour	TI @ 50% loss of Tensile Strength; ISO 2578
	151 °C @Time 1.80e+7 sec	304 °F @Time 5000 hour	TI @ 50% loss of Tensile Strength; ISO 2578
	186 °C @Time 1.80e+7 sec	367 °F @Time 5000 hour	TI @ 50% loss of Dielectric Strength; ISO 2578

Descriptive Properties		
CITnlp Conv. Index of Toxicity	0.45	NF X70-100-1/2. Not listed product (600°C)
EN 45545-2 Classification	R23 HL3	EN 45545-2. 1mm.
Injection Molding Injection Speed	Medium	
NF Classification	I2/F2	NF F16-101