

Radiflam® S FR 137 NT

Radici Group High Performance Polymers - Polyamide 6

General Information

Product Description

PA6 flame retardant injection moulding grade. Halogen and phosphorus free. Natural colour.

Suitable for parts where fire retardancy is required. Rated V-0 at 0.4 mm according to UL-94.

General

Additive	• Flame Retardant		
Features	• Flame Retardant	• Halogen Free	• Low (to None) Phosphorus Content
Agency Ratings	• EU 2011/65/EC		
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6 FR(30)		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.17	--	g/cm ³	ISO 1183
Molding Shrinkage ²				ISO 294-4
Across Flow	1.0	--	%	
Flow	1.0	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	8.0	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	2.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	508000	355000	psi	ISO 527-1/1A/1
Tensile Stress (Yield)	10900	6530	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	3.0	20	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	15	> 50	%	ISO 527-2/1A/50
Flexural Modulus ³	479000	--	psi	ISO 178
Flexural Stress ³	16000	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	1.4	--	ft-lb/in ²	
73°F	1.7	4.8	ft-lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	320	--	°F	
Deflection Temperature Under Load				ISO 75-2/af
264 psi, Unannealed	131	--	°F	
Vicat Softening Temperature	392	--	°F	ISO 306/B50
Melting Temperature ⁴	428	--	°F	ISO 11357-3

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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
Electric Strength	790	760	V/mil	IEC 60243-1
Comparative Tracking Index Solution A	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.016 in	V-0	--		
0.031 in	V-0	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.04 in	1760	--	°F	
0.08 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.04 in	1470	--	°F	
0.08 in	1470	--	°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	0.10	%
Processing (Melt) Temp	464 to 536	°F
Mold Temperature	158 to 176	°F
Injection Rate	Moderate	

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 270°C Melt Temperature, 70°C Mold Temperature, 60 MPa Cavity Pressure
- ³ 0.079 in/min
- ⁴ 10°C/min