

Radilon® S USX270 333 BK

Radici Group High Performance Polymers - Polyamide 6

General Information

Product Description

PA6 extrusion grade. Toughened. Black colour.

Suitable for extrusion of parts requiring excellent impact resistance and very high flexibility.

General

Features	• Good Flexibility	• Good Toughness	• High Impact Resistance
Agency Ratings	• EU 2011/65/EC		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Processing Method	• Extrusion	• Injection Molding	
Resin ID (ISO 1043)	• PA6-HI		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.04	--	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)				ISO 1133
275°C/10.0 kg	15	--	g/10 min	
Molding Shrinkage				ISO 294-4
Across Flow	1.4	--	%	
Flow	1.5	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	7.0	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.8	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	174000	72500	psi	ISO 527-1/1A/1
Tensile Stress (Yield)	4930	2900	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	6.5	--	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	> 100	> 100	%	ISO 527-2/1A/50
Flexural Modulus ²	167000	58000	psi	ISO 178
Flexural Stress ²	6530	2610	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	14	--	ft·lb/in ²	
73°F	33	43	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
73°F	No Break	--		
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	176	--	°F	
Deflection Temperature Under Load				ISO 75-2/ Af
264 psi, Unannealed	122	--	°F	

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Thermal	Dry	Conditioned	Unit	Test Method
Vicat Softening Temperature	221	--	°F	ISO 306/B50
Melting Temperature ³	428	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	7.8E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	7.8E-5	--	in/in/°F	ISO 11359-2
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
Comparative Tracking Index Solution A	500	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.118 in)	< 1.2	--	in/min	ISO 3795
Flame Rating (0.031 in)	HB	--		UL 94
Glow Wire Flammability Index 0.08 in	1200	--	°F	IEC 60695-2-12
Glow Wire Ignition Temperature 0.08 in	1250	--	°F	IEC 60695-2-13

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	482 to 536	°F
Mold Temperature	158 to 176	°F
Injection Rate	Moderate	
Extrusion	Dry	Unit
Drying Temperature	176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Melt Temperature	464 to 518	°F

Notes

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

² 0.079 in/min

³ 10°C/min