

Radilon® S HS 305 M BK

 Radici Group High Performance Polymers - *Polyamide 6*

General Information

Product Description

PA6 injection moulding grade. Nucleated, fast cycling. Black colour

General purpose grade, suitable for parts requiring high productivity.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Additive	• Nucleating Agent		
Features	• Fast Molding Cycle	• General Purpose	• Nucleated
Uses	• Automotive Applications • General Purpose		
Agency Ratings	• EU 2011/65/EC		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FORD WSK-M4D672-A		
Appearance	• Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6		

 Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage ²				ISO 294-4
Across Flow	1.0	--	%	
Flow	0.90	--	%	
Water Absorption (Saturation, 73°F, 0.0787 in)	9.5	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	2.7	--	%	ISO 62
Viscosity Index - Sulfuric Acid	4040	--	in ³ /lb	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	435000	174000	psi	ISO 527-1/1A/1
Tensile Stress (Yield)	11300	5800	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	4.2	30	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	30	> 50	%	ISO 527-2/1A/50
Flexural Modulus ³	406000	--	psi	ISO 178
Flexural Stress ³	15200	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	1.9	--	ft·lb/in ²	
73°F	2.9	12	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	338	--	°F	ISO 75-2/Bf
Deflection Temperature Under Load (264 psi, Unannealed)	131	--	°F	ISO 75-2/Af
Vicat Softening Temperature	374	--	°F	ISO 306/B50
Melting Temperature ⁴	428	--	°F	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity ⁵	1.0E+12	1.0E+10	ohms	IEC 62631-3-2
Volume Resistivity ⁵	1.0E+15	1.0E+13	ohms·cm	IEC 62631-3-1
Comparative Tracking Index (Solution A)	500	--	V	IEC 60112



Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.118 in)	0.0	--	in/min	ISO 3795
Flame Rating (0.031 in)	V-2	--		UL 94
Glow Wire Flammability Index (0.08 in)	1380	--	°F	IEC 60695-2-12

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	482 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/ 60°C Mold Temperature/ 30 MPa Cavity Pressure
- ³ 0.079 in/min
- ⁴ 10°C/min
- ⁵ 500V

