

# 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

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		
Appearance	• Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6		

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

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>2</sup>				ISO 294-4
Across Flow	1.0	--	%	
Flow	0.90	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	9.5	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	2.7	--	%	
Viscosity Index - Sulfuric Acid	4040	--	in <sup>3</sup> /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 <sup>3</sup>	406000	--	psi	ISO 178
Flexural Stress <sup>3</sup>	15200	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	1.9	--	ft-lb/in <sup>2</sup>	
73°F	2.9	12	ft-lb/in <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/Bf
66 psi, Unannealed	338	--	°F	
Deflection Temperature Under Load				ISO 75-2/ Af
264 psi, Unannealed	131	--	°F	
Vicat Softening Temperature	374	--	°F	ISO 306/B50

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Thermal	Dry	Conditioned	Unit	Test Method
Melting Temperature <sup>4</sup>	428	--	°F	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity <sup>5</sup>	1.0E+12	1.0E+10	ohms	IEC 62631-3-2
Volume Resistivity <sup>5</sup>	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

- <sup>1</sup> Typical properties: these are not to be construed as specifications.
- <sup>2</sup> 270°C Melt Temperature/ 60°C Mold Temperature/ 30 MPa Cavity Pressure
- <sup>3</sup> 0.079 in/min
- <sup>4</sup> 10°C/min
- <sup>5</sup> 500V