

# Radilon® D HS 105 M NT

## Radici Group High Performance Polymers - Polyamide 610

### General Information

#### Product Description

PA610 injection moulding grade. Nucleated and lubricated, fast cycling. Natural colour.

General purpose grade, suitable for parts requiring high productivity. This grade is partially renewably-sourced (64% of base polymer by weight).

#### General

Additive	<ul style="list-style-type: none"> <li>Lubricant</li> <li>Nucleating Agent</li> </ul>
Features	<ul style="list-style-type: none"> <li>Fast Molding Cycle</li> <li>Lubricated</li> <li>General Purpose</li> <li>Nucleated</li> <li>Renewable Resource Content</li> </ul>
Uses	<ul style="list-style-type: none"> <li>General Purpose</li> </ul>
Agency Ratings	<ul style="list-style-type: none"> <li>EU 2011/65/EC</li> </ul>
RoHS Compliance	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Appearance	<ul style="list-style-type: none"> <li>Natural Color</li> </ul>
Processing Method	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>
Resin ID (ISO 1043)	<ul style="list-style-type: none"> <li>PA610</li> </ul>

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

Physical	Dry	Conditioned	Unit	Test Method
Density	1.08	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.2	--	%	
Flow	1.0	--	%	
Water Absorption				ISO 62
Saturation, 73°F, 0.0787 in	3.2	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	1.4	--	%	
Viscosity Number				ISO 307
H2SO4 (Sulphuric Acid)	146	--	cm <sup>3</sup> /g	
Biobased Carbon Content	64	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	363000	189000	psi	ISO 527-1/1A/1
Tensile Stress (Yield)	10200	7250	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	5.0	15	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	40	> 100	%	ISO 527-2/1A/50
Flexural Modulus <sup>2</sup>	319000	--	psi	ISO 178
Flexural Stress <sup>2</sup>	13100	--	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	4.3	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
73°F	No Break	--		

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<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load 264 psi, Unannealed	131	--	°F	ISO 75-2/Af
Vicat Softening Temperature	365	--	°F	ISO 306/B50
Melting Temperature <sup>3</sup>	423	--	°F	ISO 11357-3
<b>Electrical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
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	600	--	V	IEC 60112
<b>Flammability</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (0.031 in)	V-2	--		UL 94
Glow Wire Flammability Index 0.08 in	1380	--	°F	IEC 60695-2-12
Glow Wire Ignition Temperature 0.08 in	1430	--	°F	IEC 60695-2-13

**Processing Information**

<b>Injection</b>	<b>Dry</b>	<b>Unit</b>
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	446 to 500	°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> 0.079 in/min

<sup>3</sup> 10°C/min