

Technical Data Sheet

Ice9™ Rigid

Thermally conductive, electrically non-conducting plastic
Product code: TC-PA6-325-000

Product type: filament or pellets
Properties based on 3D printed samples



GENERAL PROPERTIES	VALUE		
Base Material	Nylon		
Color	Black		
Density	1400 kg/m ³		
THERMAL PROPERTIES	METRIC	ENGLISH	ASTM
Thermal conductivity, in-plane	4 W/m-K	28 BTU·in/hr·ft ² ·°F	E1461
Thermal conductivity, through-plane	1 W/m-K	7 BTU·in/hr·ft ² ·°F	E1461
Coefficient of thermal expansion	40 ppm/°C	-	E831
Heat deflection temperature, 0.45 MPa	175 °C	347 °F	D648
Max. continuous temperature	200 °C	392 °F	*
MECHANICAL PROPERTIES	METRIC	ENGLISH	ASTM
Shore Hardness	-		D2240
Tensile modulus	4 GPa	580 ksi	D638
Tensile strength, Break	80 MPa	12 ksi	D638
Elongation at break	<5 %		D638
Impact strength, Izod notched	80 J/m		D256
ELECTRICAL PROPERTIES	METRIC	ENGLISH	ASTM
Volume resistivity	>10 ⁸ Ω·cm		D257
FDM PRINTING GUIDELINES	METRIC	ENGLISH	
Extruder temperature	260-290 °C	500-550 °F	
Bed temperature	80-100 °C	175-195 °F	

* Max. continuous temperature is the highest temperature recommended for operation of more than 1 hour and is based internal testing and not any recognized standard.

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Recommended FDM Print Settings

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Thermally conductive, electrically non-conducting plastic
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Product type: FDM filament or pellets



GENERAL PROPERTIES

Base material	Nylon
Color	Black
Filament diameter	1.75 or 2.85 +/- 0.05 mm

TEMPERATURE SETTINGS

	VALUE	UNITS
Extruder temperature	260-290	°C
Bed temperature	80-100	°C
Cooling fan	Off	

SLICING SETTINGS

	VALUE	UNITS
Print speed	< 30	mm/s
Layer height	>0.2	mm
Retraction distance	4-8	mm
Infill for best thermal performance	95-100	%

ADDITIONAL GUIDELINES

Nozzle diameter	>0.4 mm
Extruder type (1.75 mm)	Direct or Bowden
Extruder type (2.85 mm)	Direct or Bowden
Print bed preparation	Glue Stick
Storage instructions	Sealed bag
Drying instructions	4 hr @ 100°C

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