FDM® Nylon 12

Polyamide 12

Stratasys

Message:

Production-Grade Thermoplastic for Fortus 3D Production Systems
FDM® Nylon 12 is the first material in Stratasys' new family of nylon offerings, complementing the current portfolio of FDM materials and enabling new applications requiring: repetitive snap fits, high fatigue resistance, strong chemical resistance and press (friction) fit inserts. Nylon 12 is primarily used in aerospace, automotive and consumer goods industries to take on everything from tooling, jigs and fixtures to covers, panels and vibration resistant components. For use with Fortus® 360mc, 400mc & 900mc 3D Production Systems, FDM Nylon 12 offers unparalleled toughness and a simple, clean process - free of powders.

General Information	
Features	Durable
	Fatigue Resistant
	Good Chemical Resistance
	Good Processability
	Good Sterilizability
	High Heat Resistance
	High Impact Resistance
	Ultra High Toughness
	Vibration Damping
Uses	Aerospace Applications
	Automotive Applications
	Consumer Applications
	Engineering Parts
	Housings
	Protective Coverings
	Tooling
Appearance	Black
Processing Method	3D Printing, Fused Filament Fabrication (FFF)

Physical	Dry	Conditioned	Unit	
Thickness - Layer Capability	177.8 to 330.2	--	µm	
Flexural Strain at Break	No Break	No Break		ASTM D790

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus [1] (3.18 mm)	1310	1310	MPa	ASTM D638
Tensile Strength [2] (3.18 mm)	53.1	48.3	MPa	ASTM D638
Tensile Elongation [3]				ASTM D638
Yield, 3.18 mm	6.5	6.5	%	

Break, 3.18 mm	9.5	30	%	
Flexural Modulus [4]	1310	1310	MPa	ASTM D790
Flexural Strength [5]	70.3	68.9	MPa	ASTM D790
Impact	Dry	Conditioned	Unit	Test Method
Notched Izod Impact (23°C)	150	200	J/m	ASTM D256A
Unnotched Izod Impact (23°C)	> 2000	> 2000	J/m	ASTM D256
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ASTM D648
0.45 MPa, Unannealed	75.0	--	°C	
0.45 MPa, Annealed	97.0	--	°C	
1.8 MPa, Unannealed	55.0	--	°C	
1.8 MPa, Annealed	82.0	--	°C	
Melting Temperature	178	--	°C	

NOTE	
1.	Type I, 5.1 mm/min
2.	Type I, 5.1 mm/min
3.	Type I, 5.1 mm/min
4.	Method I (3 point load), 1.3 mm/min
5.	Method I (3 point load), 1.3 mm/min

Recommended distributors for this material

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