

**General Information**
**Product Description**

30% Glass Reinforced, PA4T, Flame Retardant, Halogen free and free of red phosphorous, Laser Direct Structuring (LDS)

**General**

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Flame Retardant		
Features	• Flame Retardant	• Halogen Free	• Low (to None) Phosphorus Content
Uses	• Laser Direct Structuring		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PPA-GF30 FR(40)		

**ASTM & ISO Properties <sup>1</sup>**

Physical	Dry	Conditioned	Unit	Test Method
Density	1.58	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.0	--	%	
Flow	0.30	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	11000	11000	MPa	ISO 527-2
Tensile Stress (Break)	120	120	MPa	ISO 527-2
Tensile Strain (Break)	1.6	1.6	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
23°C	3.0	--	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
23°C	25	--	kJ/m <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/A
1.8 MPa, Unannealed	290	--	°C	
Melting Temperature <sup>2</sup>	325	--	°C	ISO 11357-3
CLTE - Flow	3.0E-5	--	cm/cm/°C	ASTM D696
CLTE - Transverse	4.0E-5	--	cm/cm/°C	ASTM D696
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	> 1.0E+15	> 1.0E+15	ohms-cm	IEC 60093
Relative Permittivity (1.00 GHz)	4.05	--		IEC 60250
Comparative Tracking Index	400	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.40 mm	V-0	--		
1.5 mm	V-0	--		

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# ForTii® LDS51B

## DSM Engineering Plastics - Polyphthalamide

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 10°C/min

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