



AN EOS COMPANY



# Ultrasint® PA6 FR

## NYLON 6

Ultrasint® PA6 FR is an advanced engineering polymer powder containing a flame-retardant (FR) additive.

### HIGHLIGHTS

- Polyamide 6-based powder for Laser Sintering with flame retardant

### APPLICATIONS

- Switchboard parts and other electronic components
- Media flow & storage parts (i.e. air ducts for buses/ aerospace)
- Jigs & Fixtures for cables and pipes



### HEADQUARTERS

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# Ultrasint® PA6 FR



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Ultrasint® PA6 FR is an advanced engineering polymer powder containing a flame-retardant (FR) additive.

TYPICAL PHYSICAL PROPERTIES		
PROPERTY	TEST METHOD	TYPICAL VALUES
Bulk Density / kg/m <sup>3</sup>	DIN EN ISO 60	550
Printed Part Density / kg/m <sup>3</sup>	DIN EN ISO 1183-1	1300
Mean particle size d50 / μm	Laser Diffraction	65-75
Melting Temperature / °C	ISO 11357 (20 K/min)	218
Crystallization Temperature / °C	ISO 11357 (20 K/min)	169
Melt Volume Flow Rate / cm <sup>3</sup> /10min	ISO 1133 (240 °C, 2.16 kg)	10
HDT/A (1.8 MPa) / °C	ISO 75-2	113
HDT/B (0.45 MPa) / °C	ISO 75-2	207
Vicat/A (10 N) / °C	ISO 306	214
Vicat/B (50 N) / °C	ISO 306	197

TYPICAL PHYSICAL PROPERTIES					
PROPERTY	TEST METHOD	TYPICAL VALUES X-DIRECTIONS		TYPICAL VALUES Z-DIRECTIONS	
		Dry <sup>1</sup>	Cond. <sup>2</sup>	Dry <sup>1</sup>	Cond. <sup>2</sup>
Tensile Strength / MPa	ISO 527-2	56	41	33	27
Tensile Modulus / MPa	ISO 527-2	4750	2450	4500	2450
Tensile Elongation at break / %	ISO 527-2	1.4	2.6	0.8	1.2
Flexural Modulus / MPa	DIN EN ISO 178	4400	2000	3850	2050
Charpy Impact Strength (notched) / kJ/m <sup>2</sup>	ISO 179-1	1.3	1.6	1.0	1.1
Charpy Impact Strength (unnotched) / kJ/m <sup>2</sup>	ISO 179-1	4.8	7.4	2.5	3.6
Izod Impact Strength (notched) / kJ/m <sup>2</sup>	ISO 180	1.8	2.1	1.5	1.5
Izod Impact Strength (unnotched) / kJm <sup>2</sup>	ISO 180	5.0	7.0	3.4	3.8

The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change without notice.