PRELIMINARY DATASHEET

LUVOSINT® PA12 9270 BK

LUVOSINT®
Additive manufacturing solutions

Polyamide 12
unreinforced, black

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm³	1,01
Water absorption	23°C / 24h	ISO 62	ISO 3167 A	%	0,8
Mechanical properties at 23°C / 50% rh					
Tensile strength	dry, @50 mm/min	ISO 527	ISO 3167 A	MPa	46
Tensile strength (in-plane)		DIN 53504	sintered S1-bar	MPa	49
Tensile strength (out-of-plane)		DIN 53504	sintered S1-bar	MPa	29
Elongation @Fmax.	dry, @50 mm/min	ISO 527	ISO 3167 A	%	8,0
Elongation (in-plane)		DIN 53504	sintered S1-bar	%	9
Elongation at break	dry, @50 mm/min	ISO 527	ISO 3167 A	%	20
Tensile modulus	dry, @1 mm/min	ISO 527	ISO 3167 A	GPa	1,6
Tensile modulus (Flat, XY)	printed specimen, @100% infill, ±45°	ISO 527	ISO 527 - 1A	GPa	1,74
Flexural modulus (Flat, XY)	printed specimen, @100% infill, ±45°	ISO 178	ISO 3167 A	GPa	1,52
Impact strength	dry	ISO 179 1eU	80x10x4mm	kJ/m²	180
Charpy impact strength (Flat, XY)	printed specimen, @100% infill, ±45°	ISO 179 1eU	80x10x4mm	kJ/m²	52
Thermal properties					
Melting temperature	DSC	ISO 11357	molded sample	°C	180
Heat distortion temp.	HDT A	ISO 75	80x10x4mm	°C	45
Heat distortion temp.	HDT B	ISO 75	80x10x4mm	°C	95
Other properties					
Powder d10		Laser diff.	powder	µm	30
Powder d50		Laser diff.	powder	µm	75
Powder d90		Laser diff.	powder	µm	130
Powder bulk density			powder	g/cm³	0,4

Main features

Powder for laser sintering (additive manufacturing).

2022082414334

LUVOSINT® PA12 9270 BK

Polyamide 12
unreinforced, black

Recommended processing parameters

General

Due to the large variety of machines and part geometries given process parameters can only be seen as an orientation.
Feed temperature: 135 °C
Piston heater temperature: 135 °C
Part Cylinder temperature: 135 °C
Part heater temperature: 169 °C
Layer thickness: 0.10 mm
Fill laser: 28 W
Outline laser: 5 W
Scan spacing: 0.22 mm
Fill laser speed: 10 m/s

Delivery form & storage

Material will be delivered as 25 kg boxes on pallets.
Preferably storage should be effected in dry and normally temperatured rooms.

Predrying

No predrying necessary.
The powder should be de-agglomerated by using a screening process (250 microns sieve opening) before processing.

Recommended processing parameters

Due to the large variety of machines and part geometries given process parameters can only be seen as an orientation.
Feed temperature: 135 °C
Piston heater temperature: 135 °C
Part Cylinder temperature: 135 °C
Part heater temperature: 169 °C
Layer thickness: 0.10 mm
Fill laser: 28 W
Outline laser: 5 W
Scan spacing: 0.22 mm
Fill laser speed: 10 m/s

19271 24 11 20

Europe and Head Office
Lehmann&Voss&Co. KG
Alsterufer 19
20354 Hamburg
Germany
Tel +49 40 44 197-0
Email: luvocom@lehvoss.de

North America
LEHVOSS North America, LLC
185 South Broad Street
Pawcatuck, CT 06379
USA
Tel +1-855-681-3226
Email: info@lehvoss.us

Asia
LEHVOSS (Shanghai) Chemical Trading Co., Ltd.
Unit 4805, 8 Xingyi Road
Changning District, Shanghai 200336
China
Tel +86 21 62785181
Email: info@lehvoss.cn

2022082414334