PRELIMINARY DATASHEET

LUVOSINT® PP 9703 L WT

LUVOSINT®
Additive manufacturing solutions

Polypropylene-copolymer
Powder, white

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm³	0,91
Water absorption	23°C / 24h	ISO 62	ISO 3167 A	%	< 0,2
Mechanical properties at 23°C / 50% rh					
Tensile strength	dry, @50 mm/min	ISO 527	ISO 3167 A	MPa	23
Elongation @Fmax.	dry, @50 mm/min	ISO 527	ISO 3167 A	%	11,7
Elongation at break	dry, @50 mm/min	ISO 527	ISO 3167 A	%	269
Tensile modulus	dry, @1 mm/min	ISO 527	ISO 3167 A	GPa	0,8
Impact strength	dry	ISO 179 1eU	80x10x4mm	kJ/m²	4,7
Thermal properties					
Melting temperature	DSC	ISO 11357	molded sample	°C	149
Vicat softening temp.	VST A	DIN ISO 306	ISO 3167 A	°C	118
Electrical properties					
Surface resistance	ROB	DIN EN 62631-3-2	Ronde 60x4mm	Ω	>10¹¹
Other properties					
Powder d10		Laser diff.	powder	µm	25
Powder d50		Laser diff.	powder	µm	65
Powder d90		Laser diff.	powder	µm	115

Main features

Powder for laser sintering (additive manufacturing). 3D-printing of light-weight parts with high toughness for automotive, robotics and many more applications. Suitable for parts in contact with food.

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Recommended processing parameters

General

Due to the large variety of machines and part geometries given process parameters can only be seen as an orientation.
Please use material data based on PA12, but part bed and cylinder temperature must be decreased.
Part bed temperature: 129 °C
Cylinder temperature: 105 °C
Scan speed: 3000 mm/s
Hatch distance: 0.30 mm
Layer thickness: 0.15 mm
Laser power: 31 W
x-/y-Scaling 3.1
Z-scaling 2.1

Delivery form & storage

Material will be delivered as 20 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

In general LUVOSINT PP can be processed on standard lasersinter machines while observing the usual technical guidelines.
Part bed powder can be re-used. Strictly avoid PA contaminations.

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