PRELIMINARY DATASHEET

LUVOCOM® 3F PP 9929 NT

LUVOCOM® 3F
Additive manufacturing solutions

Polypropylene-copolymer
unreinforced, natural

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm³	0,9
Water absorption	23°C / 24h	ISO 62	ISO 3167 A	%	<0,3
Melt volume rate (MVR)		230°C /2,16kg	pellet	cm³/10 min	9
Mechanical properties at 23°C / 50% rh					
Tensile strength	dry, @50 mm/min	ISO 527	ISO 3167 A	MPa	15
Elongation @Fmax.	dry, @50 mm/min	ISO 527	ISO 3167 A	%	6
Elongation at break	dry, @50 mm/min	ISO 527	ISO 3167 A	%	500
Flexural modulus	dry, @2 mm/min	ISO 178	ISO 3167 A	GPa	0,75
Impact strength, notched	dry	ISO 179 1eA	80x10x4mm	kJ/m²	65
Charpy Impact Strength notched	-30°C	ISO 179 1eA	80x10x4mm	kJ/m²	10
Thermal properties					
Vicat softening temp.	VST A	DIN ISO 306	ISO 3167 A	°C	135
Heat distortion temp.	HDT B	ISO 75	80x10x4mm	°C	80
Electrical properties					
Insulation resistance	strip electrode R25	DIN EN 62631-3-3	ISO 3167 A	Ω	$>10^{12}$
Surface resistance	ROB	DIN EN 62631-3-2	Ronde 60x4mm	Ω	$>10^{12}$

Main features

Reduced moment of inertia compared with metal parts.

Recommended processing parameters

General

3D Printing parameters may vary from machine to machine. The following settings may be used as an indication: nozzle temperature: 220 - 250 °C / nozzle material: abbrasion resistant / print bed temperature: > 50 °C / layer thickness: > 0,2mm / printing speed 40 - 60 mm/s.
The processing notes provided merely represent a recommendation for general use. Due to the large variety of machines, geometries and volumes of parts, etc., it may be necessary to employ different settings according to the specific application. Please contact us for further information.

Delivery form & storage

Unless indicated otherwise, the material is delivered as 3mm long pellets in sealed bags on pallets. Preferably storage should be effected in dry and normally temperatured rooms.

Predrying

It is advisable to predry the granules with a suitable dryer immediately before processing. The granule may absorb moisture

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from the environment.

Dryer type	Temperature °C	Drying time in h
Dehumidifying dryer	70 - 95	2 - 4

Recommended processing parameters

In general LUVOCOM® 3F can be processed on conventional extrusion machines while observing the usual technical guidelines. Any added fibrous materials or fillers may have an abrasive effect. In this case the cylinder, screw and die should be protected against wear as is usual in the processing of reinforced thermoplastic materials. Lengthy dwell times for the melts in the cylinder should be avoided. Lower the temperatures during interruptions!

Mold	Melt temperature	Nozzle	Zone 3	Zone 2	Zone 1
40 - 80 °C	60 °C	220 - 250 °C	230 - 260 °C	220 - 250 °C	220 - 250 °C

Additional information

During processing, the moisture content should not exceed 0.2%. Moisture may lead to smearing and in extreme cases to foaming. Usually the material can be processed over a broad temperature range and can thus be adapted to a wide variety of processing conditions. The processing notes provided merely represent a recommendation for general use. Due to the large variety of machines, geometries and volumes of parts, etc., it may be necessary to employ different settings according to the specific application. Please contact us for further information.

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