

Polyetherimide  
unreinforced, grey

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm <sup>3</sup>	1,38
Water absorption	23°C / 24h	ISO 62	MPTS ISO 3167 A	%	<0,3
Linear mould shrinkage		DIN 16742	MPTS ISO 3167 A	%	0,2-0,5
<b>Mechanical properties at 23°C / 50% rh</b>					
Tensile strength	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	MPa	105
Elongation at maximum force	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	%	4,5
Elongation at break	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	%	5
Modulus of elasticity	dry, @1 mm/min	ISO 527	MPTS ISO 3167 A	GPa	3,5
<b>Thermal properties</b>					
Heat distortion temperature	HDT A	ISO 75	molded sample	°C	200
Continuous service temperature	20.000 h	IEC 60216	MPTS ISO 3167 A	°C	170
<b>Electrical properties</b>					
Insulation resistance strip electrode	R25	DIN IEC 60167	MPTS ISO 3167 A	Ω	>10 <sup>12</sup>
Surface resistance	ROB	DIN IEC 60093	Ronde 60x4mm	Ω	>10 <sup>12</sup>

### Main features

High dimensionally stable precision parts.

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### Recommended processing parameters

#### General

3D Printing parameters may vary from machine to machine. The following settings may be used as an indication: nozzle temperature: 400 - 450 °C / nozzle material: abrasion resistant / print bed temperature: > 120 °C / layer thickness: > 0,15mm / 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.

#### Predrying

It is advisable to predry the granulate with a suitable dryer immediately before processing. The granulate may absorb moisture from the environment.

Dryer type	Temperature °C	Drying time in h
Dehumidifying dryer	120	> 8
or	150	> 4

#### Processing

Zone 1	°C	330 - 350
Zone 2	°C	340 - 390
Zone 3	°C	350 - 400
Nozzle	°C	350 - 400
Mold	°C	150 - 180
Melt temperature	°C	380

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!

#### 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.

#### Additional information

During processing the moisture level should not exceed 0.03%, otherwise porosity and surface defects (e.g. smearing) may occur. Predrying is recommended even when sealed original containers are being used.

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