PRELIMINARY DATASHEET

LUVOTECH® eco PPS GFM65 BK

Polyphenylene sulfide, linear
with glass fibers and mineral filler, black

Physical properties		Test method	Units	Typical value
Specific gravity		ISO 1183	g/cm³	2,0
Water absorption	23°C / 24h	ISO 62	%	0,02
Mould shrinkage (transverse)		ISO 294	%	0,2
Mould shrinkage (parallel)		ISO 294	%	0,3
Mechanical properties at 23°C / 50% rh				
Tensile strength	dry, @50 mm/min	ISO 527	MPa	120
Elongation @Fmax.	dry, @50 mm/min	ISO 527	%	0,8
Tensile modulus	dry, @1 mm/min	ISO 527	GPa	21
Flexural strength	dry, @10 mm/min	ISO 178	MPa	210
Flexural elongation @Fmax.	dry, @10 mm/min	ISO 178	%	1
Flexural modulus	dry, @2 mm/min	ISO 178	GPa	22
Impact strength	dry	ISO 179 1eU	kJ/m²	20
Impact strength	-30°C	ISO 179 1eU	kJ/m²	20
Thermal properties				
Heat distortion temp.	HDT A	ISO 75	°C	265
Electrical properties				
Insulation resistance	bar electrode R25	ref. to DIN EN 62631-3-3	Ω	$>10^{12}$
Surface resistance		ref. to DIN EN 62631-3-2	Ω	$>10^{12}$
Other properties				
Carbon footprint		DIN EN ISO 14040/44 DIN EN ISO 14067	kg CO2 eq/kg	0,64

Main features

Strong, stiff parts. Low warpage. Isotropic shrinkage characteristics.

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Recommended processing parameters

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 from the environment.

Dryer type	Temperature °C	Drying time in h
Dehumidifying dryer	100 - 140	2 - 4
or	50 - 90	> 4

Recommended processing parameters

In general this product can be processed on conventional injection moulding machines while observing the usual technical guidelines. Any added fibrous materials or fillers may have an abrasive effect. In this case the cylinder and screw 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
150 - 190 °C	330 °C	320 - 340 °C	320 - 340 °C	310 - 330 °C	300 - 320 °C

Additional information

For components with high surface requirements, the measured tool surface temperature should be at least 170 °C or higher. 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.

The Carbon footprint was calculated using established, science-based methods and the Life Cycle Assessment (LCA) software GaBi. The calculation was conducted based on the international LCA standards DIN EN ISO 14040, DIN EN ISO 14044 and the standard DIN EN ISO 14067 “Carbon footprint of products“.

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