LUVOCOM® 1-8181

LUVOCOM
High-performance compounds

Polyamide 66
with carbon fibers, toughness-modified, heat stabilized, natural color (black)

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm³	1,17
Water absorption	23°C / 24h	ISO 62	ISO 3167 A	%	<1,0
Mould shrinkage (transverse)	T(mold): 110 °C	ISO 294	⊥ 60x60x2 mm	%	1,1-1,4
Mould shrinkage (parallel)	ISO max: 460 bar	ISO 294	∥ 60x60x2 mm	%	0,7-1,0
Mechanical properties at 23°C / 50% rh					
Tensile strength	dry, @50 mm/min	ISO 527	ISO 3167 A	MPa	105
Elongation @Fmax.	dry, @50 mm/min	ISO 527	ISO 3167 A	%	6
Tensile modulus	dry, @1 mm/min	ISO 527	ISO 3167 A	GPa	7,5
Flexural strength	dry, @10 mm/min	ISO 178	ISO 3167 A	MPa	153
Flexural elongation @Fmax.	dry, @10 mm/min	ISO 178	ISO 3167 A	%	8
Flexural modulus	dry, @2 mm/min	ISO 178	ISO 3167 A	GPa	6,4
Impact strength	dry	ISO 179 1eU	80x10x4mm	kJ/m²	63
Impact strength	-30°C	ISO 179 1eU	80x10x4mm	kJ/m²	50
Impact strength, notched	dry	ISO 179 1eA	80x10x4mm	kJ/m²	7
Thermal properties					
Continuous service temp.	20.000 h	IEC 60216	ISO 3167 A	°C	120
Service temperature	during lifetime max. 200h		ISO 3167 A	°C	150
Electrical properties					
Insulation resistance	strip electrode R25	DIN EN 62631-3-3	ISO 3167 A	Ω	≥10⁸
Surface resistance	ROB	DIN EN 62631-3-2	Ronde 60x4mm	Ω	≥10⁸

Main features

Strong, stiff, impact-resistant parts. Reduced moment of inertia compared with metal parts. Low warpage.

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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	75	6 - 16
Vacuum Dryer	105	4 - 6

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
90 - 120 °C	290 °C	280 - 300 °C	290 - 310 °C	290 - 310 °C	290 - 310 °C

Additional information

During processing the moisture level should not exceed 0.05%, otherwise molecular degradation and surface defects (e.g. smearing) may occur. Excessively high predrying temperatures may cause discoloration. 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.

LEHVOSS Group