PRELIMINARY DATASHEET

LUVOCOM® 1100-8134

LUVOCOM®
High-performance compounds

Polyethersulfone
with carbon fibers, black

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm³	1,48
Water absorption	23°C / 24h	ISO 62	MPTS ISO 3167 A	%	<0,1
Linear mould shrinkage		DIN 16742	MPTS ISO 3167 A	%	0,05-0,3
Mechanical properties at 23°C / 50% rh					
Tensile strength	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	MPa	180
Elongation at maximum force	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	%	2
Modulus of elasticity	dry, @1 mm/min	ISO 527	MPTS ISO 3167 A	GPa	19
Flexural strength	dry, @10 mm/min	ISO 178	MPTS ISO 3167 A	MPa	250
Flexural elongation at max. force	dry, @10 mm/min	ISO 178	MPTS ISO 3167 A	%	2,4
Flexural modulus	dry, @2 mm/min	ISO 178	MPTS ISO 3167 A	GPa	17
Charpy impact strength	dry	ISO 179 1eU	80x10x4mm	kJ/m²	30
Charpy impact strength	dry		80x10x4mm	kJ/m²	30
Charpy impact strength	-30°C	ISO 179 1eU	80x10x4mm	kJ/m²	25
Thermal properties					
Continuous service temperature	20.000 h	IEC 60216	MPTS ISO 3167 A	°C	180
Service temperature	during lifetime max. 200h		MPTS ISO 3167 A	°C	200
Electrical properties					
Insulation resistance strip electrode	R25	DIN IEC 60167	MPTS ISO 3167 A	Ω	≤10³
Surface resistance	ROB	DIN IEC 60093	Ronde 60x4mm	Ω	<10⁴

Main features

Strong, stiff parts. High dimensionally stable precision parts. Electrically conductive, suitable for continuous discharging of statically-generated electricity.

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Recommended processing parameters

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	150	3 - 5
Processing		
Zone 1	°C	355 - 375
Zone 2	°C	360 - 380
Zone 3	°C	350 - 370
Nozzle	°C	340 - 360
Mold	°C	120 - 200
Melt temperature	°C	350
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!		
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 0.05%, otherwise porosity and surface defects (e.g. smearing) may occur. To avoid internal stresses, a low shear load should be used for processing. The parts may be tempered at a later stage to reduce internal stresses. 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. High-temperature polymers place increased demands on the tool steels employed. Please contact us for further information.		

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