PRELIMINARY DATASHEET

LUVOCOM® EOG-300

LUVOCOM®
High-performance compounds

Polyetheretherketone
with glass fibers, natural color

Physical properties		Test method	Specimen	Units	Typical value
Specific gravity		ISO 1183-3		g/cm³	1,51
Water absorption	23°C / 24h	ISO 62	MPTS ISO 3167 A	%	<0,1
Melt volume rate (MVR)	380°C / 10kg	ISO 1133	pellet	cm³/10 min	7
Linear mould shrinkage		DIN 16742	MPTS ISO 3167 A	%	0,4-0,6
Flammability behaviour		UL 94	1/16"		(V-0)
Mechanical properties at 23°C / 50% rh					
Tensile strength	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	MPa	138
Elongation at maximum force	dry, @50 mm/min	ISO 527	MPTS ISO 3167 A	%	2,6
Modulus of elasticity	dry, @1 mm/min	ISO 527	MPTS ISO 3167 A	GPa	10,5
Flexural strength	dry, @10 mm/min	ISO 178	MPTS ISO 3167 A	MPa	205
Flexural elongation at max. force	dry, @10 mm/min	ISO 178	MPTS ISO 3167 A	%	3,2
Flexural modulus	dry, @2 mm/min	ISO 178	MPTS ISO 3167 A	GPa	9,5
Charpy impact strength	dry	ISO 179 1eU	80x10x4mm	kJ/m²	43
Charpy impact strength	dry		80x10x4mm	kJ/m²	43
Charpy impact strength	-30°C	ISO 179 1eU	80x10x4mm	kJ/m²	41
Charpy impact strength, notched	dry	ISO 179 1eA	80x10x4mm	kJ/m²	7
Charpy Impact Strength notched	-30°C	ISO 179 1eA	80x10x4mm	kJ/m²	7
Thermal properties					
Heat distortion temperature	HDT A	ISO 75	molded sample	°C	255
Continuous service temperature	20.000 h	IEC 60216	MPTS ISO 3167 A	°C	250
Service temperature	during lifetime max. 200h		MPTS ISO 3167 A	°C	280
Electrical properties					
Insulation resistance strip electrode	R25	DIN IEC 60167	MPTS ISO 3167 A	Ω	$>10^{12}$
Surface resistance	ROB	DIN IEC 60093	Ronde 60x4mm	Ω	$>10^{12}$

Main features

Strong, stiff parts. Especially suitable for dynamic-stress situations. High dimensionally stable precision parts, even at elevated temperatures and narrow tolerance range. Low warpage.

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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 - 6
or	120	6 - 8
Processing		
Zone 1	°C	360 - 370
Zone 2	°C	380 - 390
Zone 3	°C	390 - 400
Nozzle	°C	360 - 380
Mold	°C	170 - 200
Melt temperature	°C	390

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 content should not exceed 0.05%. To avoid internal stresses, a medium to high injection rate should be used. An increase in tool temperature may be helpful. Post-crystallization may lead to warpage at elevated operating temperatures. This can be counteracted by suitable heat treatment. 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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