LUVOCOM® 1105/CF/30/EM/L

Polyetheretherketone

Lehmann & Voss & Co.

Message:

LUVOCOM®1105/CF/30/EM/L is a polyetheretherketone (PEEK) material, and the filler is 30% carbon fiber reinforced material. This product is available in Europe.
LUVOCOM®The main features of 1105/CF/30/EM/L are:
flame retardant/rated flame
Flame Retardant
Conductivity
High stiffness
high strength
Typical application areas include:
engineering/industrial accessories
textile/fiber
Aerospace
Automotive Industry
medical/health care

General Information	
Filler / Reinforcement	Carbon fiber reinforced material, 30% filler by weight
Features	Conductivity Rigidity, high High strength Electrostatic discharge protection Good chemical resistance Hydrolysis stability Flame retardancy
Uses	Pump parts Bushing Gear Textile applications Engineering accessories Aerospace applications Application in Automobile Field Medical/nursing supplies Bearing
Appearance	Natural color

Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm³	ISO 1183
Molding Shrinkage	0.050 - 0.20	%	DIN 16901
Water Absorption (23°C, 24 hr)	< 0.10	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	26000	MPa	ISO 527-2
Tensile Stress (Break)	220	MPa	ISO 527-2
Tensile Strain (Yield)	1.3	%	ISO 527-2
Flexural Modulus	21000	MPa	ISO 178
Flexural Stress	320	MPa	ISO 178
Coefficient of Friction			
Dynamic	0.23		
Static	0.18		
Flexural Strain at Flexural Strength	1.8	%	ISO 178
Maximum operating temperature-Short Term	280	°C	
Insulation Resistance		ohms	IEC 60167
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.0	kJ/m^2	ISO 179/1eA
23°C	8.0	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1fU
-30°C	20	kJ/m^2	ISO 179/1fU
23°C	25	kJ/m^2	ISO 179/1fU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	260	°C	ISO 75-2/A
Continuous Use Temperature	250	°C	UL 746B
Vicat Softening Temperature	325	°C	ISO 306/A
CLTE - Flow	9.0E-6	cm/cm/°C	DIN 53752
Thermal Conductivity	0.60	W/m/K	DIN 52612
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	< 1.0E+4	ohms	IEC 60093
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating [1]	V-0		UL 94
Injection	**Nominal Value**	**Unit**	
Drying Temperature			
Hot air dryer, A	150	°C	
Hot air dryer, B	120	°C	
Drying Time			
Hot air dryer, A	3.0 - 6.0	hr	
Hot air dryer, B	6.0 - 8.0	hr	
Suggested Max Moisture	0.050	%	
Rear Temperature	360 - 370	°C	
Middle Temperature	380 - 390	°C	
Front Temperature	390 - 400	°C	
Nozzle Temperature	360 - 380	°C	

Processing (Melt) Temp	390	°C
Mold Temperature	170 - 190	°C

Injection instructions

General
In general LUVOCOM® 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!
Predrying (optional)
It is advisable to predry the granulate with a suitable dryer immediately before processing.
The granulate may absorb moisture from the air.
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.

NOTE

1.	Not recognized by UL.

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