LUVOCOM® 1104/XCF/30 VP

Polyether Ketone

Lehmann & Voss & Co.

Message:

LUVOCOM ® 1104/XCF/30 VP is a polyether ketone (PEK) material, which contains a 30% carbon fiber reinforced material. This product is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. LUVOCOM ® The main characteristics of 1104/XCF/30 VP are: good rigidity.

Typical application areas include: engineering/industrial accessories Automotive Industry

General Information				
Filler / Reinforcement	Carbon fiber reinforced material, 30% filler by weight			
Features	Rapid Static Decay			
	Rigid, good			
	Good liquidity			
	Good strength			
Uses	Engineering accessories			
	Application in Automobile Field			
Appearance	Natural color			
Physical	Nominal Value	Unit	Test Method	
Density	1.41	g/cm³	ISO 1183	
Molding Shrinkage	0.10 - 0.30	%	DIN 16901	
Water Absorption (23°C, 24 hr)	< 0.10	%		
Mechanical	Nominal Value	Unit	Test Method	
Tensile Modulus	34000	MPa	ISO 527-2	
Tensile Stress (Break)	335	MPa	ISO 527-2	
Tensile Strain (Yield)	1.7	%	ISO 527-2	
Flexural Modulus	29000	MPa	ISO 178	
Flexural Stress	465	MPa	ISO 178	
Flexural Strain at Flexural Strength	2.1	%	ISO 178	
Maximum operating temperature-Short Term	300	°C		
Insulation Resistance		ohms	IEC 60167	
Impact	Nominal Value	Unit	Test Method	
Charpy Notched Impact Strength (23°C)	10	kJ/m²	ISO 179/1eA	
Charpy Unnotched Impact Strength (23°C)	70	kJ/m²	ISO 179/1eU	
Thermal	Nominal Value	Unit	Test Method	
Heat Deflection Temperature (1.8 MPa, Unannealed)	330	°C	ISO 75-2/A	

Continuous Use Temperature	260	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+6	ohms	IEC 60093
Injection	Nominal Value	Unit	
Drying Temperature			
Dehumidification desiccant, B	150	°C	
Hot air dryer, A	140	°C	
Drying Time			
Dehumidification desiccant, B	4.0 - 8.0	hr	
Hot air dryer, A	4.0 - 16	hr	
Suggested Max Moisture	0.050	%	
Rear Temperature	370 - 390	°C	
Middle Temperature	380 - 420	°C	
Front Temperature	390 - 420	°C	
Nozzle Temperature	390 - 420	°C	
Processing (Melt) Temp	390	°C	
Mold Temperature	180 - 220	°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.

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519 Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

