

# LUVOCOM® 1104-7452 VP

Polyether Ketone

Lehmann & Voss & Co.

## Message:

LUVOCOM® 1104-7452 VP is a polyether ketone (PEK) material, and the filler is glass 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 1104-7452 VP are:

Good stiffness

fatigue resistance

Typical application areas include:

engineering/industrial accessories

Automotive Industry

General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Features	Rigid, good		
	Good liquidity		
	Good strength		
	Fatigue resistance		
Uses	Engineering accessories		
	Application in Automobile Field		
Appearance	Black		
Physical	Nominal Value	Unit	Test Method
Density	1.53	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage	0.30 - 0.60	%	DIN 16901
Water Absorption (23°C, 24 hr)	< 0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	11500	MPa	ISO 527-2
Tensile Stress (Break)	180	MPa	ISO 527-2
Tensile Strain (Yield)	2.1	%	ISO 527-2
Flexural Modulus	9000	MPa	ISO 178
Flexural Stress	260	MPa	ISO 178
Coefficient of Friction			
Dynamic	0.31		
Static	0.28		
Flexural Strain at Flexural Strength	2.7	%	ISO 178
Maximum operating temperature-Short Term	290	°C	
Insulation Resistance	> 1.0E+12	ohms	IEC 60167
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.0	kJ/m <sup>2</sup>	ISO 179/1eA

Charpy Unnotched Impact Strength (23°C)	45	kJ/m <sup>2</sup>	ISO 179/1fU
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	260	°C	UL 746B
Vicat Softening Temperature	325	°C	ISO 306/A
CLTE - Flow	2.2E-5	cm/cm/°C	DIN 53752
Thermal Conductivity	0.40	W/m/K	DIN 52612
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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