

LUVOCOM® TPI-0953

Thermoplastic Polyimide

Lehmann & Voss & Co.

Message:

LUVOCOM®TPI-0953 is a thermoplastic polyimide material, and its filler is 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 features of the TPI-0953 are:

flame retardant/rated flame

Flame Retardant

chemical resistance

Wear-resistant

Heat resistance

Typical application areas include:

engineering/industrial accessories

Electrical/electronic applications

textile/fiber

Aerospace

Automotive Industry

General Information			
Filler / Reinforcement	Carbon fiber reinforced material		
Additive	PTFE lubricant		
Features	Low friction coefficient		
	Good chemical resistance		
	Good wear resistance		
	Heat resistance, high		
	Hydrolysis resistance		
	Lubrication		
	Self-lubricating		
	Flame retardancy		
Uses	Pump parts		
	Bushing		
	Gear		
	Electrical/Electronic Applications		
	Textile applications		
	Engineering accessories		
	Aerospace applications		
	Application in Automobile Field		
	Medical/nursing supplies		
	Bearing		
Appearance	Dark gray		
Physical	Nominal Value	Unit	Test Method

Density	1.46	g/cm ³	ISO 1183
Molding Shrinkage	0.20 - 0.50	%	DIN 16901
Water Absorption (23°C, 24 hr)	< 0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10000	MPa	ISO 527-2
Tensile Stress (Break)	120	MPa	ISO 527-2
Tensile Strain (Yield)	2.3	%	ISO 527-2
Flexural Modulus	8000	MPa	ISO 178
Flexural Stress	175	MPa	ISO 178
Flexural Strain at Flexural Strength	3.0	%	ISO 178
Insulation Resistance		ohms	IEC 60167
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	10	kJ/m ²	ISO 179/1eA
23°C	10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1fU
-30°C	35	kJ/m ²	ISO 179/1fU
23°C	30	kJ/m ²	ISO 179/1fU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	230	°C	ISO 75-2/A
Continuous Use Temperature	230	°C	UL 746B
CLTE - Flow	3.0E-5	cm/cm/°C	DIN 53752
Thermal Conductivity	0.43	W/m/K	DIN 52612
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+10	ohms	IEC 60093
Flammability	Nominal Value	Unit	Test Method
Flame Rating ¹	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature			
A	180	°C	
B	200	°C	
Drying Time			
A	5.0 - 10	hr	
B	3.0 - 4.0	hr	
Suggested Max Moisture	0.010	%	
Rear Temperature	370 - 390	°C	
Middle Temperature	380 - 390	°C	
Front Temperature	380 - 400	°C	
Nozzle Temperature	390 - 410	°C	
Processing (Melt) Temp	380	°C	
Mold Temperature	180 - 200	°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 0.01%. 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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