

# LUVOCOM® 20-9293

Polyphthalamide

LEHVOSS Group

## Message:

LUVOCOM® 20-9293 is a polyxylene amide (PPA) material, and the 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 20-9293 are:

High stiffness

high strength

moisture resistance

Wear-resistant

Lubrication

Typical application areas include:

engineering/industrial accessories

Electrical/electronic applications

textile/fiber

Automotive Industry

business/office supplies

General Information			
Filler / Reinforcement	Carbon fiber reinforced material		
Additive	PTFE lubricant		
Features	Low friction coefficient		
	Moisture resistance		
	Rigidity, high		
	High strength		
	Good wear resistance		
	Lubrication		
Uses	Gear		
	Textile applications		
	Engineering accessories		
	Switch		
	Application in Automobile Field		
	Business equipment		
Appearance	Bearing		
	Black		
Physical	Nominal Value	Unit	Test Method
Density	1.43	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage	0.050 - 0.20	%	DIN 16901
Water Absorption (23°C, 24 hr)	< 0.30	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	39000	MPa	ISO 527-2

Tensile Stress (Break)	360	MPa	ISO 527-2
Tensile Strain (Yield)	1.4	%	ISO 527-2
Flexural Modulus	34000	MPa	ISO 178
Flexural Stress	520	MPa	ISO 178
Flexural Strain at Flexural Strength	1.7	%	ISO 178
Maximum operating temperature-Short Term	195	°C	
Insulation Resistance		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)	70	kJ/m <sup>2</sup>	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	165	°C	UL 746B
Injection	Nominal Value	Unit	
Drying Temperature			
Hot air dryer, A	80	°C	
Vacuum dryer, B	105	°C	
Drying Time			
Hot air dryer, A	16	hr	
Vacuum dryer, B	4.0 - 5.0	hr	
Rear Temperature	320 - 340	°C	
Middle Temperature	320 - 345	°C	
Front Temperature	325 - 350	°C	
Nozzle Temperature	320 - 330	°C	
Processing (Melt) Temp	330	°C	
Mold Temperature	135 - 160	°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 level should not exceed 0.05%, otherwise molecular degradation and surface defects (e.g. smearing) may occur. As the material absorbs water rapidly, originally sealed containers should only be opened immediately before processing. Processing temperatures above 340°C may very rapidly cause thermal damage and should therefore be avoided.

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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