

Technical Data Sheet

# LUVOCOM® 50/TF/15/BK

## Polycarbonate

<b>General</b>			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• PTFE Lubricant: 15%		
Features	• Flame Retardant • Good Impact Resistance	• High Dimensional Stability • Low Warpage	• Lubricated • Wear Resistant
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
<b>Physical</b>	<b>Typical Value</b>	<b>Unit</b>	<b>Test Method</b>
Density	1.29	g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)	40	cm <sup>3</sup> /10min	ISO 1133
Linear Mould Shrinkage	0.60 to 0.80	%	DIN 16742
Water Absorption (24 hr, 23°C)	< 0.20	%	ISO 62
<b>Mechanical</b>	<b>Typical Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus	2200	MPa	ISO 527-1/1
Tensile Stress	50.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	5.0	%	ISO 527-2/50
Flexural Modulus <sup>1</sup>	2000	MPa	ISO 178
Flexural Stress <sup>2</sup>	80.0	MPa	ISO 178
Flexural Strain - at max. force <sup>2</sup>	6.0	%	ISO 178
Charpy Notched Impact Strength <sup>3</sup>			ISO 179/1eA
--	25	kJ/m <sup>2</sup>	
-30°C	15	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength <sup>3</sup>			ISO 179/1fU
--	100	kJ/m <sup>2</sup>	
-30°C	80	kJ/m <sup>2</sup>	
<b>Thermal</b>	<b>Typical Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load 1.8 MPa, Unannealed	132	°C	ISO 75-2/A
Continuous Use Temperature <sup>4</sup>	130	°C	IEC 60216
Vicat Softening Temperature	160	°C	ISO 306/A
CLTE - Flow <sup>5</sup> (4.00 mm)	7.0E-5	cm/cm/°C	ISO 11359-2
Service Temperature - during lifetime max. 200 hr	150	°C	
<b>Electrical</b>	<b>Typical Value</b>	<b>Unit</b>	<b>Test Method</b>
Insulation Resistance <sup>6</sup>	> 1.0E+12	ohms	IEC 60167
<b>Flammability</b>	<b>Typical Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (1.6 mm)	V-0		UL 94

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Injection	Typical Value	Unit
Drying Temperature - Desiccant Dryer	120	°C
Drying Time - Desiccant Dryer	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	280 to 300	°C
Middle Temperature	290 to 310	°C
Front Temperature	300 to 320	°C
Nozzle Temperature	290 to 310	°C
Processing (Melt) Temp	295	°C
Mold Temperature	80 to 120	°C

**Injection Notes**

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

- It is advisable to predry the granulate with a suitable dryer immediately before processing.
- The granulate may absorb moisture from the environment.

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 0.02%, otherwise molecular degradation may occur.
- Suitable heat treatment may increase resistance to the formation of stress cracks.
- 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.
- Please contact us for further information.

Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup> 2.0 mm/min

<sup>2</sup> 10 mm/min

<sup>3</sup> 80x10x4mm

<sup>4</sup> 20,000 hr

<sup>5</sup> 10x8x4 mm

<sup>6</sup> Strip Electrode R25

## LUVOCOM® 50/TF/15/BK Polycarbonate

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