

Preliminary data sheet.

LUVOCOM 1301-8400

PPS, linear
with carbon fiber, PTFE, lubricant modified
natural color (black)

| Physical Properties | Test Method | Specimen | Units | Value | |
|----------------------------------|-------------------------------|-----------------|-------------------------|---------------------|------------------|
| Specific Gravity | ISO 1183 | MPTS ISO 3167 A | g/cm ³ | 1,56 | |
| Water absorption | 23 °C / 24 h | MPTS ISO 3167 A | % | <0,1 | |
| Melt Flow Index | MFR | Granulat | g /10 Min | | |
| Melt Volume-Flow Rate | MVR | Granulat | cm ³ /10 Min | | |
| Linear Mould Shrinkage | VSR 3mm | MPTS ISO 3167 A | % | 0,05-0,2 | |
| Flammability Behaviour | UL 94 | 1/16" | - | V-0 | |
| Mechanical Properties | | | | | |
| At 23°C, 50 % rh | | | | | |
| Tensile Strength | σ_{zM} | ISO 527 | MPTS ISO 3167 A | MPa | 175 |
| Elongation | ϵ_{zM} | ISO 527 | MPTS ISO 3167 A | % | 1 |
| Modulus of Elasticity | E_t | ISO 527 | MPTS ISO 3167 A | GPa | 27 |
| Flexural Strength | σ_{bM} | ISO 178 | MPTS ISO 3167 A | MPa | 255 |
| Flexural Elongation | ϵ_{bM} | ISO 178 | MPTS ISO 3167 A | % | 1,2 |
| Flexural Modulus | E_{3B} | ISO 178 | MPTS ISO 3167 A | GPa | 24 |
| Charpy Impact Strength | | ISO 179 1eU | MPTS ISO 3167 A | kJ/m ² | 25 |
| Charpy Impact Strength | -30°C | ISO 179 1eU | MPTS ISO 3167 A | kJ/m ² | |
| Charpy Impact Strength notched | | ISO 179 eA | MPTS ISO 3167 A | kJ/m ² | |
| Charpy Impact Strength notched | -30°C | ISO 179 eA | MPTS ISO 3167 A | kJ/m ² | |
| Thermal Properties | | | | | |
| Vicat Softening Temp. | VST A | DIN ISO 306 | MPTS ISO 3167 A | °C | 240 |
| Heat Distortion Temp | HDT A | ISO 75 | MPTS ISO 3167 A | °C | |
| Continuous Service Temp | | UL 746B | MPTS ISO 3167 A | °C | 220 |
| Maximum (short term) Use Temp. | | | | °C | 240 |
| Coefficient of Thermal Expansion | | DIN 53752 | | 10 ⁻⁵ /K | 0,9 |
| Thermal Conductivity | | DIN 52612 | | W/mK | 0,75 |
| Electrical Properties | | | | | |
| Insulation Resistance | Strip Elektr. R ₂₅ | DIN/IEC 60167 | MPTS ISO 3167 A | Ω | <10 ³ |
| Surface Resistance | R _{OB} | DIN IEC 60093 | Ronde 60x4 mm | Ω | <10 ² |
| Tribological Properties | | | | | |
| Coeff. of Friction | μ static dynamic | | | N/N | |

8400 1 02 10

The material does not necessarily have to be predried; when originally sealed containers are used, this process may normally be omitted. Processing temperatures above 360°C may very rapidly cause thermal damage and should therefore be avoided. 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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The data are based on thorough investigations and are only intended as advice. They are not intended to replace separate testing relating to a specific application. Material properties may vary according to the shape and size of the article produced and may be influenced by the processing conditions.



High-performance engineering thermoplastics

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Recommended processing 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.

| Dryer type | Temperature °C | Drying time in h |
|---------------------|----------------|------------------|
| Dehumidifying dryer | 100-140 | 2 to 4 |
| | 50-90 | >4 to |

Processing Temperatures

| | | |
|------------------|----|-------------|
| Zone 1 | °C | 300 to 320 |
| Zone 2 | °C | 310 to 330 |
| Zone 3 | °C | 320 to 340 |
| Nozzle | °C | 320 to 340 |
| Mould | °C | 150 to 180 |
| Mass Temperature | °C | optimum 330 |

Delivery Form

The material will be delivered as cylindrical pellets with approx. 3 mm diameter and length of cut in sealed bags on pallets.

Storage

Preferably storage should be effected in dry and normally temperatured rooms.

Properties and application Examples

High-strength and stiffness parts with low creep.

Improved friction and wear behaviour. Emergency(dry) running property.

Electrically conductive, suitable for continuous discharging of statically generated electricity.

High continuous-use and heat-distortion temperatures. Non flammable.

Control disks, gear wheels, pump impellers, gear parts for automotive appliances, chip carrier.

Automotive industry, textile-and office machinery, medical- and precision engineering.

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