

# LUVOCOM® 1104-8928

Polyether Ketone

Lehmann & Voss & Co.

## Message:

LUVOCOM® 1104-8928 is a polyether ketone (PEK) material that contains a mineral filler. This product is available in Europe.

LUVOCOM® The main features of 1104-8928 are:

Flame Retardant

anti-warping

chemical resistance

Typical application areas include:

engineering/industrial accessories

Automotive Industry

| General Information                               |                                 |                   |             |
|---|---------------------------------|-------------------|-------------|
| Filler / Reinforcement                            | Mineral filler                  |                   |             |
| Features  | Low warpage                     |                   |             |
|   | Good chemical resistance        |                   |             |
|   | Flame retardancy                |                   |             |
| Uses  | Engineering accessories         |                   |             |
|   | Application in Automobile Field |                   |             |
|   | Cam                             |                   |             |
| Appearance  | Natural color                   |                   |             |
| Physical  | Nominal Value                   | Unit              | Test Method |
| Density   | 1.33                            | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage                                 | 1.0 - 1.6                       | %                 | DIN 16901   |
| Water Absorption (23°C, 24 hr)                    | < 0.50                          | %                 |             |
| Mechanical  | Nominal Value                   | Unit              | Test Method |
| Tensile Modulus                                   | 5000                            | MPa               | ISO 527-2   |
| Tensile Stress (Break)                            | 90.0                            | MPa               | ISO 527-2   |
| Tensile Strain (Yield)                            | 2.3                             | %                 | ISO 527-2   |
| Flexural Modulus                                  | 4500                            | MPa               | ISO 178     |
| Flexural Stress                                   | 170                             | MPa               | ISO 178     |
| Flexural Strain at Flexural Strength              | 6.8                             | %                 | ISO 178     |
| Maximum operating temperature-Short Term          | 280                             | °C                |             |
| Insulation Resistance                             | > 1.0E+12                       | ohms              | IEC 60167   |
| Impact  | Nominal Value                   | Unit              | Test Method |
| Charpy Unnotched Impact Strength (23°C)           | 30                              | kJ/m <sup>2</sup> | ISO 179/1eU |
| Thermal   | Nominal Value                   | Unit              | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 162                             | °C                | ISO 75-2/A  |

|                               |               |          |           |
|-------------------------------|---------------|----------|-----------|
| Continuous Use Temperature    | 260           | °C       | UL 746B   |
| Vicat Softening Temperature   | 300           | °C       | ISO 306/A |
| CLTE - Flow                   | 4.7E-5        | cm/cm/°C | DIN 53752 |
| Thermal Conductivity          | 0.25          | 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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#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

