

**LUVOCOM® 1105-8160**

LEHVOSS Group - Polyetheretherketone

## General Information

**Product Description**

with carbon fibers, lubricant modified; natural color (black)

## Main Features

- Chemically- and hydrolytically- resistant parts, non flammable.
- Improved friction and wear behaviour, self-lubricating, for highest tribological requirements.
- Dynamically-stressed parts moving at high velocity.
- Strong, stiff parts; low thermal coefficient of expansion.

**General**

|                        |  |  |  |
|------------------------|--|--|--|
| Material Status        | • Commercial: Active   |  |  |
| Availability           | • Africa & Middle East<br>• Asia Pacific   | • Europe<br>• Latin America  | • North America                        |
| Filler / Reinforcement | • Carbon Fiber   |  |  |
| Additive               | • Lubricant  |  |  |
| Features               | • Chemical Resistant<br>• High Stiffness<br>• High Strength<br>• Hydrolytically Stable | • Ignition Resistant<br>• Low CLTE<br>• Low Friction<br>• Lubricated | • Self Lubricating<br>• Wear Resistant |
| Appearance             | • Black  |  |  |

 Properties <sup>1</sup>

| Physical  | Nominal Value | Unit                   | Test Method     |
|---|---------------|------------------------|-----------------|
| Density   | 1.42          | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Volume-Flow Rate (MVR) (380°C/10.0 kg)             | 40            | cm <sup>3</sup> /10min | ISO 1133        |
| Water Absorption (24 hr, 73°F)                          | < 0.10        | %                      | ISO 62          |
| Mechanical  | Nominal Value | Unit                   | Test Method     |
| Tensile Modulus   | 2.03E+6       | psi                    | ISO 527-1/1     |
| Tensile Stress  | 26100         | psi                    | ISO 527-2       |
| Tensile Strain (Yield)                                  | 1.9           | %                      | ISO 527-2/50    |
| Flexural Modulus <sup>2</sup>                           | 1.74E+6       | psi                    | ISO 178         |
| Flexural Stress <sup>3</sup>                            | 36300         | psi                    | ISO 178         |
| Flexural Strain - (Yield) <sup>4</sup>                  | 2.4           | %                      | ISO 178         |
| Impact  | Nominal Value | Unit                   | Test Method     |
| Charpy Notched Impact Strength                          | 1.9           | ft·lb/in <sup>2</sup>  | ISO 179/1eA     |
| Charpy Unnotched Impact Strength                        | 15            | ft·lb/in <sup>2</sup>  | ISO 179/1eU     |
| Thermal   | Nominal Value | Unit                   | Test Method     |
| Deflection Temperature Under Load (264 psi, Unannealed) | 500           | °F                     | ISO 75-2/A      |
| Continuous Use Temperature <sup>5</sup>                 | 482           | °F                     | IEC 60216       |
| Vicat Softening Temperature                             | 563           | °F                     | ISO 306/A       |
| Service Temperature - during lifetime max. 200 hr       | 536           | °F                     |                 |
| Electrical  | Nominal Value | Unit                   | Test Method     |
| Surface Resistivity                                     | < 1.0E+8      | ohms                   | IEC 62631-3-2   |
| Insulation Resistance <sup>6</sup>                      | < 1.0E+9      | ohms                   | IEC 62631-3-3   |
| Flammability  | Nominal Value | Unit                   | Test Method     |
| Flame Rating (0.06 in)                                  | V-0           |                        | Internal Method |

## Processing Information

| Injection          | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature |               |      |



|                        |               |
|------------------------|---------------|
| Desiccant Dryer, A     | 302 °F        |
| Desiccant Dryer, B     | 248 °F        |
| <b>Drying Time</b>     |               |
| Desiccant Dryer, A     | 3.0 to 6.0 hr |
| Desiccant Dryer, B     | 6.0 to 8.0 hr |
| Rear Temperature       | 680 to 698 °F |
| Middle Temperature     | 716 to 734 °F |
| Front Temperature      | 734 to 752 °F |
| Nozzle Temperature     | 680 to 716 °F |
| Processing (Melt) Temp | 734 °F        |
| Mold Temperature       | 338 to 392 °F |

#### Injection Notes

During processing, the moisture level should not exceed 0.01%, otherwise molecular degradation may occur. As the material absorbs water very quickly, the predried material should be fed to the processing immediately. 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

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 0.079 in/min

<sup>3</sup> 0.39 in/min

<sup>4</sup> 10 mm/min

<sup>5</sup> 20,000 hr

<sup>6</sup> strip electrode R25

