

**LUVOCOM® 50/GF/20/TF/20/BK 100**

LEHOSS Group - Polycarbonate

**General Information**
**Product Description**

with glass fibers and PTFE; black

**Main Features**

- Strong, stiff parts.
- Improved friction and wear behaviour. Optimised for dry running operations.
- High dimensionally stable precision parts, even at elevated temperatures and narrow tolerance range.
- Not flammable.

**General**

|                        |                              |                      |                  |
|------------------------|------------------------------|----------------------|------------------|
| Material Status        | • Commercial: Active         |                      |                  |
| Availability           | • Africa & Middle East       | • Europe             | • North America  |
|                        | • Asia Pacific               | • Latin America      |                  |
| Filler / Reinforcement | • Glass Fiber                |                      |                  |
| Additive               | • PTFE Lubricant             |                      |                  |
| Features               | • High Dimensional Stability | • High Strength      | • Lubricated     |
|                        | • High Heat Resistance       | • Ignition Resistant | • Wear Resistant |
|                        | • High Stiffness             | • Low Friction       |                  |
| Appearance             | • Black                      |                      |                  |

**Properties <sup>1</sup>**

| <b>Physical</b>   | <b>Nominal Value</b> | <b>Unit</b>            | <b>Test Method</b> |
|---|----------------------|------------------------|--------------------|
| Density   | 1.48                 | g/cm <sup>3</sup>      | ISO 1183           |
| Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)              | 13                   | cm <sup>3</sup> /10min | ISO 1133           |
| Water Absorption (24 hr, 73°F)                          | < 0.20               | %                      | ISO 62             |
| <b>Mechanical</b>                                       | <b>Nominal Value</b> | <b>Unit</b>            | <b>Test Method</b> |
| Tensile Modulus   | 1.02E+6              | psi                    | ISO 527-1/1        |
| Tensile Stress  | 13800                | psi                    | ISO 527-2          |
| Tensile Strain (Yield)                                  | 2.4                  | %                      | ISO 527-2/50       |
| Flexural Modulus <sup>2</sup>                           | 870000               | psi                    | ISO 178            |
| Flexural Stress <sup>3</sup>                            | 20000                | psi                    | ISO 178            |
| Flexural Strain - (Yield) <sup>4</sup>                  | 3.2                  | %                      | ISO 178            |
| <b>Impact</b>   | <b>Nominal Value</b> | <b>Unit</b>            | <b>Test Method</b> |
| Charpy Unnotched Impact Strength                        |                      |                        | ISO 179/1eU        |
| --  | 18                   | ft·lb/in <sup>2</sup>  |                    |
| -22°F   | 14                   | ft·lb/in <sup>2</sup>  |                    |
| <b>Thermal</b>  | <b>Nominal Value</b> | <b>Unit</b>            | <b>Test Method</b> |
| Deflection Temperature Under Load (264 psi, Unannealed) | 293                  | °F                     | ISO 75-2/A         |
| Continuous Use Temperature <sup>5</sup>                 | 266                  | °F                     | IEC 60216          |
| Vicat Softening Temperature                             | 320                  | °F                     | ISO 306/A          |
| CLTE - Flow   | 1.8E-5               | in/in/°F               | ISO 11359-2        |
| Service Temperature - during lifetime max. 200 hr       | 302                  | °F                     |                    |
| <b>Electrical</b>                                       | <b>Nominal Value</b> | <b>Unit</b>            | <b>Test Method</b> |
| Insulation Resistance <sup>6</sup>                      | > 1.0E+12            | ohms                   | IEC 62631-3-3      |
| <b>Flammability</b>                                     | <b>Nominal Value</b> | <b>Unit</b>            | <b>Test Method</b> |
| Flame Rating (0.06 in)                                  | V-0                  |                        | Internal Method    |

**Processing Information**

| <b>Injection</b>                       | <b>Nominal Value</b> | <b>Unit</b> |
|--|----------------------|-------------|
| Drying Temperature - Desiccant Dryer A | 248                  | °F          |



|                                  |               |
|----------------------------------|---------------|
| Drying Time - Desiccant Dryer, A | 4.0 to 6.0 hr |
| Rear Temperature                 | 536 to 572 °F |
| Middle Temperature               | 554 to 590 °F |
| Front Temperature                | 572 to 608 °F |
| Nozzle Temperature               | 554 to 590 °F |
| Processing (Melt) Temp           | 563 °F        |
| Mold Temperature                 | 176 to 248 °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

