

## LUVOCOM® 1/XCF/30

LEHVOSS Group - Polyamide 66

### General Information

#### Product Description

with carbon fibers, heat stabilized; natural color (black)

#### Main Features

- Electrically conductive, suitable for continuous discharging of statically-generated electricity.
- High dimensionally stable precision parts with low warpage and narrow tolerance range.
- Reduced moment of inertia compared with metal parts.
- Very strong and stiff parts; low coefficient of thermal expansion.

#### General

|                        |                                                                                |                                                   |                 |
|------------------------|--------------------------------------------------------------------------------|---------------------------------------------------|-----------------|
| Material Status        | • Commercial: Active                                                           |                                                   |                 |
| Availability           | • Africa & Middle East<br>• Asia Pacific                                       | • Europe<br>• Latin America                       | • North America |
| Filler / Reinforcement | • Carbon Fiber                                                                 |                                                   |                 |
| Additive               | • Heat Stabilizer                                                              |                                                   |                 |
| Features               | • Electrically Conductive<br>• Heat Stabilized<br>• High Dimensional Stability | • High Stiffness<br>• High Strength<br>• Low CLTE | • Low Warpage   |
| Appearance             | • Black                                                                        |                                                   |                 |

### Properties <sup>1</sup>

| Physical                                                | Nominal Value | Unit                  | Test Method   |
|---------------------------------------------------------|---------------|-----------------------|---------------|
| Density                                                 | 1.28          | g/cm <sup>3</sup>     | ISO 1183      |
| Water Absorption (24 hr, 73°F)                          | < 1.0         | %                     | ISO 62        |
| Mechanical                                              | Nominal Value | Unit                  | Test Method   |
| Tensile Modulus                                         | 4.21E+6       | psi                   | ISO 527-1/1   |
| Tensile Stress                                          | 45700         | psi                   | ISO 527-2     |
| Tensile Strain (Yield)                                  | 1.8           | %                     | ISO 527-2/50  |
| Flexural Modulus <sup>2</sup>                           | 3.34E+6       | psi                   | ISO 178       |
| Flexural Stress <sup>3</sup>                            | 63800         | psi                   | ISO 178       |
| Flexural Strain - (Yield) <sup>4</sup>                  | 2.5           | %                     | ISO 178       |
| Impact                                                  | Nominal Value | Unit                  | Test Method   |
| Charpy Notched Impact Strength                          | 5.7           | ft·lb/in <sup>2</sup> | ISO 179/1eA   |
| Charpy Unnotched Impact Strength                        |               |                       | ISO 179/1eU   |
| --                                                      | 43            | ft·lb/in <sup>2</sup> |               |
| -22°F                                                   | 43            | ft·lb/in <sup>2</sup> |               |
| Thermal                                                 | Nominal Value | Unit                  | Test Method   |
| Deflection Temperature Under Load (264 psi, Unannealed) | 482           | °F                    | ISO 75-2/A    |
| Continuous Use Temperature <sup>5</sup>                 | 248           | °F                    | IEC 60216     |
| CLTE - Flow                                             | 7.8E-6        | in/in/°F              | ISO 11359-2   |
| Service Temperature - during lifetime max. 200 hr       | 320           | °F                    |               |
| Electrical                                              | Nominal Value | Unit                  | Test Method   |
| Surface Resistivity                                     | < 1.0E+3      | ohms                  | IEC 62631-3-2 |
| Insulation Resistance <sup>6</sup>                      | < 1.0E+3      | ohms                  | IEC 62631-3-3 |

### Processing Information

| Injection          | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature |               |      |
| Desiccant Dryer, A | 167           | °F   |
| Vacuum Dryer, B    | 221           | °F   |



|                        |               |
|------------------------|---------------|
| Drying Time            |               |
| Desiccant Dryer, A     | 6.0 to 16 hr  |
| Vacuum Dryer, B        | 4.0 to 6.0 hr |
| Rear Temperature       | 554 to 590 °F |
| Middle Temperature     | 554 to 590 °F |
| Front Temperature      | 554 to 590 °F |
| Nozzle Temperature     | 536 to 572 °F |
| Processing (Melt) Temp | 554 °F        |
| Mold Temperature       | 194 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

