

**WITCOM**

A member of Wittenburg Group

Your partner in speciality engineering plastics compounds

**Preliminary Data Sheet Witcom PA66/8LC-HS**

40% long carbon fibres

Latest revision: March 2013

| Properties | Test methods | Units | Witcom<br>PA66/8LC-HS |
|------------|--------------|-------|-----------------------|
|------------|--------------|-------|-----------------------|

**Physical properties**

|                                        |          |                   |             |
|----------------------------------------|----------|-------------------|-------------|
| Specific gravity                       | ISO 1183 | g/cm <sup>3</sup> | 1,28        |
| Water absorption at saturation, 23 °C  | ISO 62   | %                 | 5,1         |
| Humidity absorption, 23 °C/50 % r.h.   | ISO 62   | %                 | 1,5         |
| Mould shrinkage (flow direction, 3 mm) | ISO 2577 | %                 | 0,10 - 0,30 |

**Mechanical properties**

|                                 |             |                   |       |
|---------------------------------|-------------|-------------------|-------|
| Tensile strength (max.)         | ISO 527     | MPa               | 310   |
| Elongation at break             | ISO 527     | %                 | 1 - 2 |
| Tensile modulus                 | ISO 527     | GPa               | 34,0  |
| Flexural strength               | ISO 178     | MPa               | 460   |
| Flexural modulus                | ISO 178     | GPa               | 33,0  |
| IZOD impact strength, notched   | ISO 180/1eA | kJ/m <sup>2</sup> | 22,0  |
| IZOD impact strength, unnotched | ISO 180/1eU | kJ/m <sup>2</sup> | 65,0  |

**Thermal properties**

|                                               |           |                                   |     |
|-----------------------------------------------|-----------|-----------------------------------|-----|
| Heat distortion temperature (1,81 MPa)        | ISO 75    | °C                                | 250 |
| Relative temperature index, 3 mm, with impact | UL 746B   | °C                                | 105 |
| Coefficient of linear thermal expansion       | ISO 11359 | K <sup>-1</sup> ·10 <sup>-5</sup> | 1,9 |

**Flammability**

|                   |                 |   |             |
|-------------------|-----------------|---|-------------|
| Burning behaviour | IEC 60695-11-10 | - | HB @ 3,0 mm |
| UL recognition    | UL94            | - | -           |

**Electrical properties**

|                            |             |      |                                   |
|----------------------------|-------------|------|-----------------------------------|
| Surface resistivity        | ASTM D257   | Ω/sq | 10 <sup>1</sup> - 10 <sup>3</sup> |
| Comparative tracking index | IEC 60112   | V    | -                                 |
| Glow wire rating, 1,6 mm   | IEC 695-2-1 | °C   | 750                               |

**Processing conditions (injection moulding)**

|                                         |                       |
|-----------------------------------------|-----------------------|
| Drying conditions (dehumidifying drier) | : 4 - 8 Hours @ 80 °C |
| Maximum allowable moisture content      | : 0,10 %              |
| Melt temperature                        | : 275 - 295 °C        |
| Mould temperature                       | : 95 - 170 °C         |
| Screw speed                             | : 0,1 - 0,2 m/s       |
| Back pressure                           | : 0 - 1,0 MPa         |
| Injection pressure                      | : Keep to a minimum   |
| Injection speed                         | : Fast ram speed      |
| Hold pressure                           | : Keep to a minimum   |

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