

## Technical Data Sheet



### ALCOM PA66 910/1.1 AR10 CF10

|                        |                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------|
| Base Polymer           | Polyamide 66                                                                                                   |
| Filler/Additive System | 10 % carbon fibres, 10 % aramid                                                                                |
| Special Features       | improved sliding / wear, heat stabilised, high stiffness, electrically conductive, reduced surface resistivity |
| Market Segment         | Automotive, Machinery                                                                                          |
| Application Area       | injection moulded parts                                                                                        |
| Typical Applications   | functional components                                                                                          |

|                               |                                                                                       |
|-------------------------------|---------------------------------------------------------------------------------------|
| Pre-Drying Conditions         | in a dry air (dessiccant) dryer <80 °C<br>for 2-12 h<br>dependant on moisture content |
| Processing Injection Moulding | melt temperature 280-300 °C<br>mould temperature 80-120 °C                            |
| Storage                       | dry, protected from light                                                             |

| Properties                                               | Value     | Dimension         | Test Norm     |
|----------------------------------------------------------|-----------|-------------------|---------------|
| <b>Mechanical Properties</b>                             |           |                   |               |
| Flexural Modulus                                         | 8000      | MPa               | ISO 178       |
| Flexural Strength                                        | 200       | MPa               | ISO 178       |
| Tensile Modulus                                          | 8300      | MPa               | ISO 527       |
| Tensile Strength at Break                                | 130       | MPa               | ISO 527       |
| Tensile Elongation at Break                              | 2         | %                 | ISO 527       |
| Impact Strength (Charpy, 23°C)                           | 20        | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy, 23°C)                   | 3.5       | kJ/m <sup>2</sup> | ISO 179/1eA   |
| <b>Thermal Properties</b>                                |           |                   |               |
| Vicat B50                                                | 250       | °C                | ISO 306       |
| HDT / A (1,8 MPa)                                        | 240       | °C                | ISO 75-1/-2   |
| DSC (Melt Point)                                         | 260       | °C                | ISO 11357     |
| <b>Electrical Properties</b>                             |           |                   |               |
| Surface Resistance                                       | 500       | Ohm               | IEC 62631-3-2 |
| <b>Rheological Properties</b>                            |           |                   |               |
| Shrinkage (lengthwise, 24h)                              | 0.2 - 0.3 | %                 | ISO 294-4     |
| Shrinkage (lateral, 24h)                                 | 0.6 - 0.8 | %                 | ISO 294-4     |
| <b>Physical Properties</b>                               |           |                   |               |
| Density                                                  | 1200      | kg/m <sup>3</sup> | ISO 1183      |
| <b>Tribologic Properties</b>                             |           |                   |               |
| Coefficient of Sliding Friction $\mu$ (pv = 5*1 MPa*m/s) | 0.25      | -                 | ASTM G 137    |

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|                                                                                            |      |
|--------------------------------------------------------------------------------------------|------|
| Coefficient of Sliding Friction $\mu H$ ( $p v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$ ) | 0.31 |
| Specific Wear Rate $w_s$ ( $p v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$ )                | 0.37 |
| Linear Wear Rate $w$ ( $p v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$ )                    | 6.7  |

|                             |            |
|-----------------------------|------------|
| -                           | ASTM G 137 |
| E-6 $\text{mm}^3/\text{Nm}$ | ASTM G 137 |
| $\mu\text{m/h}$             | ASTM G 137 |