

## Technical Data Sheet



## ALCOM PC 740/3162.1 CF10 GF10 TF10

|                        |                                                                  |
|------------------------|------------------------------------------------------------------|
| Base Polymer           | Polycarbonate                                                    |
| Filler/Additive System | 10 % glass fibres, 20 % carbon fibre/PTFE                        |
| Special Features       | electrically conductive, improved sliding / wear, high stiffness |
| Market Segment         | Automotive, Machinery                                            |
| Typical Applications   | housings, functional components                                  |

|                       |                                                                                                                                        |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Pre-Drying Conditions | 120 °C in a dry air (dessiccant) dryer for 2-3 h<br>in an air circulating dryer 100-120 °C for 4-12 h<br>dependant on moisture content |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------|

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| Processing Injection Moulding | melt temperature 310-330 °C<br>mould temperature 80-130 °C |
|-------------------------------|------------------------------------------------------------|

| Properties                                               | Value     | Dimension              | Test Norm     |
|----------------------------------------------------------|-----------|------------------------|---------------|
| <b>Mechanical Properties</b>                             |           |                        |               |
| Flexural Modulus                                         | 10400     | MPa                    | ISO 178       |
| Flexural Strength                                        | 190       | MPa                    | ISO 178       |
| Tensile Modulus                                          | 10700     | MPa                    | ISO 527       |
| Tensile Strength at Break                                | 120       | MPa                    | ISO 527       |
| Tensile Elongation at Break                              | 2         | %                      | ISO 527       |
| Impact Strength (Charpy, 23 °C)                          | 40        | kJ/m <sup>2</sup>      | ISO 179/1eU   |
| Impact Strength (Charpy, -40 °C)                         | 40        | kJ/m <sup>2</sup>      | ISO 179/1eU   |
| Notched Impact Strength (Charpy, 23 °C)                  | 10        | kJ/m <sup>2</sup>      | ISO 179/1eA   |
| Notched Impact Strength (Charpy, -40 °C)                 | 7.5       | kJ/m <sup>2</sup>      | ISO 179/1eA   |
| <b>Thermal Properties</b>                                |           |                        |               |
| HDT / A (1,8 MPa)                                        | 143       | °C                     | ISO 75-1/-2   |
| <b>Electrical Properties</b>                             |           |                        |               |
| Surface Resistance                                       | 300       | Ohm                    | IEC 62631-3-2 |
| <b>Rheological Properties</b>                            |           |                        |               |
| Melt Index (MVR)                                         | 5.5       | cm <sup>3</sup> /10min | ISO 1133      |
| MVR temperature                                          | 300       | °C                     | -             |
| MVR load                                                 | 1.2       | kg                     | -             |
| Shrinkage (24h)                                          | 0.1 - 0.3 | %                      | ISO 294-4     |
| <b>Physical Properties</b>                               |           |                        |               |
| Density                                                  | 1380      | kg/m <sup>3</sup>      | ISO 1183      |
| <b>Tribologic Properties</b>                             |           |                        |               |
| Coefficient of Sliding Friction $\mu$ (pv = 3*1 MPa*m/s) | 0.3       | -                      | ASTM G 137    |

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|                                                                                            |      |                             |            |
|--------------------------------------------------------------------------------------------|------|-----------------------------|------------|
| Coefficient of Sliding Friction $\mu H$ ( $p v = 3 \cdot 1 \text{ MPa} \cdot \text{m/s}$ ) | 0.18 | -                           | ASTM G 137 |
| Specific Wear Rate $w_s$ ( $p v = 3 \cdot 1 \text{ MPa} \cdot \text{m/s}$ )                | 0.28 | E-6 $\text{mm}^3/\text{Nm}$ | ASTM G 137 |
| Linear Wear Rate $w$ ( $p v = 3 \cdot 1 \text{ MPa} \cdot \text{m/s}$ )                    | 3.1  | $\mu\text{m/h}$             | ASTM G 137 |

#### Flammability

|                                |        |       |              |
|--------------------------------|--------|-------|--------------|
| Flammability (1.5 mm)          | V-2    | class | UL 94        |
| Yellow Card available          | yes    | -     | -            |
| Flammability (3.0 mm)          | V-1    | class | UL 94        |
| Yellow Card available          | yes    | -     | -            |
| Glow Wire (GWFI, 850°C, 2.0mm) | passed | -     | DIN EN 60695 |