

## Technical Data Sheet



### ALCOM POM 770/1 PTFE15

## MOCOM

|                        |                                                      |
|------------------------|------------------------------------------------------|
| Base Polymer           | Polyoxymethylene Copolymer                           |
| Filler/Additive System | 15 % PTFE                                            |
| Special Features       | improved sliding / wear                              |
| Market Segment         | Automotive, Machinery                                |
| Application Area       | gear wheels, roller bearings                         |
| Typical Applications   | functional components, bearings and sliding elements |

|                       |                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-Drying Conditions | in a dry air (dessiccant) dryer 100-110 °C<br>for 2-3 h<br>in an air circulating dryer 100-110 °C<br>for 3-5 h<br>dependant on moisture content |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| Processing Injection Moulding | melt temperature 180-220 °C<br>mould temperature 60-100 °C |
|-------------------------------|------------------------------------------------------------|

|         |                           |
|---------|---------------------------|
| Storage | dry, protected from light |
|---------|---------------------------|

| Properties                               | Value     | Dimension              | Test Norm   |
|------------------------------------------|-----------|------------------------|-------------|
| <b>Mechanical Properties</b>             |           |                        |             |
| Flexural Modulus                         | 2200      | MPa                    | ISO 178     |
| Flexural Stress (3.5% Strain)            | 60        | MPa                    | ISO 178     |
| Tensile Modulus                          | 2250      | MPa                    | ISO 527     |
| Tensile Strength                         | 50        | MPa                    | ISO 527     |
| Tensile Elongation at Break              | 13        | %                      | ISO 527     |
| Impact Strength (Charpy, 23 °C)          | 50        | kJ/m <sup>2</sup>      | ISO 179/1eU |
| Impact Strength (Charpy, -40 °C)         | 50        | kJ/m <sup>2</sup>      | ISO 179/1eU |
| Notched Impact Strength (Charpy, 23 °C)  | 4.5       | kJ/m <sup>2</sup>      | ISO 179/1eA |
| Notched Impact Strength (Charpy, -40 °C) | 3.5       | kJ/m <sup>2</sup>      | ISO 179/1eA |
| <b>Thermal Properties</b>                |           |                        |             |
| Vicat B50                                | 145       | °C                     | ISO 306     |
| HDT / A (1,8 MPa)                        | 90        | °C                     | ISO 75-1/-2 |
| DSC (Melt Point)                         | 173       | °C                     | ISO 11357   |
| <b>Rheological Properties</b>            |           |                        |             |
| Melt Index (MVR)                         | 6         | cm <sup>3</sup> /10min | ISO 1133    |
| MVR temperature                          | 190       | °C                     | -           |
| MVR load                                 | 2.16      | kg                     | -           |
| Shrinkage (lengthwise, 24h)              | 2 - 2.4   | %                      | ISO 294-4   |
| Shrinkage (lateral, 24h)                 | 1.9 - 2.3 | %                      | ISO 294-4   |

Technical Data Sheet



ALCOM POM 770/1 PTFE15



Physical Properties

|         |      |                   |          |
|---------|------|-------------------|----------|
| Density | 1480 | kg/m <sup>3</sup> | ISO 1183 |
|---------|------|-------------------|----------|

Tribologic Properties

|                                                            |      |                         |            |
|------------------------------------------------------------|------|-------------------------|------------|
| Coefficient of Sliding Friction $\mu$ (pv = 5*1 MPa*m/s)   | 0.25 | -                       | ASTM G 137 |
| Coefficient of Sliding Friction $\mu_H$ (pv = 5*1 MPa*m/s) | 0.16 | -                       | ASTM G 137 |
| Specific Wear Rate ws (pv = 5*1 MPa*m/s)                   | 0.5  | E-6 mm <sup>3</sup> /Nm | ASTM G 137 |
| Linear Wear Rate w (pv = 5*1 MPa*m/s)                      | 9    | $\mu\text{m/h}$         | ASTM G 137 |

Diagrams

Stress-Strain

