

# AKROTEK® PK-VM GF 30 natural (4706)

Polyketone, Aliphatic

AKRO-PLASTIC GmbH

Message:

AKROTEK® PK-VM GF 30 natural (4706) is a 30% glass fibre reinforced Polyketon with high stiffness and strength and light inherent color. Applications are mainly components in mechanical engineering and the automotive industry.

| General Information                 |              |                                  |                   |                 |
|-------------------------------------|--------------|----------------------------------|-------------------|-----------------|
| Filler / Reinforcement              |              | Glass Fiber,30% Filler by Weight |                   |                 |
| Features                            |              | High Stiffness                   |                   |                 |
|                                     |              | High Strength                    |                   |                 |
| Uses                                |              | Automotive Applications          |                   |                 |
|                                     |              | Engineered Applications          |                   |                 |
| Appearance                          |              | Natural Color                    |                   |                 |
| Resin ID (ISO 1043)                 |              | PK GF30                          |                   |                 |
| Physical                            | Dry          | Conditioned                      | Unit              | Test Method     |
| Density (23°C)                      | 1.48         | --                               | g/cm <sup>3</sup> | ISO 1183        |
| Spiral Flow                         | 98.0         | --                               | cm                | Internal Method |
| Molding Shrinkage                   |              |                                  |                   | ISO 294-4       |
| Across Flow                         | 1.0          | --                               | %                 |                 |
| Flow                                | 0.40         | --                               | %                 |                 |
| Humidity Absorption - 62% RH (70°C) | 0.60 to 0.70 | --                               | %                 | ISO 1110        |
| Reinforcement Content               | 30           | --                               | %                 | ISO 1172        |
| Mechanical                          | Dry          | Conditioned                      | Unit              | Test Method     |
| Tensile Modulus                     | 8000         | 7700                             | MPa               | ISO 527-2/1     |
| Tensile Stress (Break)              | 115          | 100                              | MPa               | ISO 527-2/5     |
| Tensile Strain (Break)              | 2.0          | 2.0                              | %                 | ISO 527-2/5     |
| Flexural Modulus <sup>1</sup>       | 8200         | --                               | MPa               | ISO 178         |
| Flexural Stress <sup>2</sup>        | 165          | --                               | MPa               | ISO 178         |
| Impact                              | Dry          | Conditioned                      | Unit              | Test Method     |
| Charpy Notched Impact Strength      |              |                                  |                   | ISO 179/1eA     |
| -40°C                               | 12           | --                               | kJ/m <sup>2</sup> |                 |
| -30°C                               | 12           | --                               | kJ/m <sup>2</sup> |                 |
| 23°C                                | 15           | 15                               | kJ/m <sup>2</sup> |                 |
| Charpy Unnotched Impact Strength    |              |                                  |                   | ISO 179/1eU     |
| -40°C                               | 45           | --                               | kJ/m <sup>2</sup> |                 |

| -30°C                                             | 45            | --          | kJ/m <sup>2</sup> |                |
|---------------------------------------------------|---------------|-------------|-------------------|----------------|
| 23°C                                              | 45            | 35          | kJ/m <sup>2</sup> |                |
| Thermal                                           | Dry           | Conditioned | Unit              | Test Method    |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 215           | --          | °C                | ISO 75-2/A     |
| Melting Temperature <sup>3</sup>                  | 220           | --          | °C                | DIN EN 11357-1 |
| Electrical                                        | Dry           | Conditioned | Unit              | Test Method    |
| Surface Resistivity                               | 1.0E+12       | 1.0E+10     | ohms              | IEC 60093      |
| Volume Resistivity                                | 1.0E+13       | 1.0E+10     | ohms·cm           | IEC 60093      |
| Flammability                                      | Dry           | Conditioned | Unit              | Test Method    |
| Flame Rating (1.60 mm)                            | HB            | --          |                   | UL 94          |
| Glow Wire Flammability Index (2.00 mm)            | 650           | --          | °C                | IEC 60695-2-12 |
| NOTE                                              |               |             |                   |                |
| 1.                                                | 2.0 mm/min    |             |                   |                |
| 2.                                                | 2.0 mm/min    |             |                   |                |
| 3.                                                | 10 K/min, DSC |             |                   |                |

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