

# AKROTEK® PEEK GF 30 natural (5047)

Polyetheretherketone

AKRO-PLASTIC GmbH

Message:

AKROTEK® PEEK GF 30 natural (5047) is a 30% glass fibre reinforced polyetheretherketone with high stiffness and strength  
Applications are mainly elements in the automotive-, aeronautical-, industrial- and medical engineering that require high strength in a temperature environment above 150°C

| General Information                     |       |                                  |                   |             |
|-----------------------------------------|-------|----------------------------------|-------------------|-------------|
| Filler / Reinforcement                  |       | Glass Fiber,30% Filler by Weight |                   |             |
| Features                                |       | High Stiffness                   |                   |             |
|                                         |       | High Strength                    |                   |             |
| Uses                                    |       | Aerospace Applications           |                   |             |
|                                         |       | Automotive Applications          |                   |             |
|                                         |       | Industrial Applications          |                   |             |
|                                         |       | Medical/Healthcare Applications  |                   |             |
| Appearance                              |       | Natural Color                    |                   |             |
| Resin ID (ISO 1043)                     |       | PEEK GF30                        |                   |             |
| Physical                                | Dry   | Conditioned                      | Unit              | Test Method |
| Density (23°C)                          | 1.50  | --                               | g/cm <sup>3</sup> | ISO 1183    |
| Humidity Absorption - 62% RH (70°C)     | 0.18  | --                               | %                 | ISO 1110    |
| Flexural Strain at Break <sup>1</sup>   | 2.8   | --                               | %                 | ISO 178     |
| Reinforcement Content                   | 30    | --                               | %                 | ISO 1172    |
| Mechanical                              | Dry   | Conditioned                      | Unit              | Test Method |
| Tensile Modulus                         | 11500 | 11200                            | MPa               | ISO 527-2/1 |
| Tensile Stress (Break)                  | 180   | 162                              | MPa               | ISO 527-2/5 |
| Tensile Strain (Break)                  | 2.5   | 2.1                              | %                 | ISO 527-2/5 |
| Flexural Modulus <sup>2</sup>           | 11100 | --                               | MPa               | ISO 178     |
| Flexural Stress <sup>3</sup>            | 265   | --                               | MPa               | ISO 178     |
| Impact                                  | Dry   | Conditioned                      | Unit              | Test Method |
| Charpy Notched Impact Strength (23°C)   | 10    | 9.0                              | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C) | 62    | 52                               | kJ/m <sup>2</sup> | ISO 179/1eU |
| Thermal                                 | Dry   | Conditioned                      | Unit              | Test Method |
| Heat Deflection Temperature             |       |                                  |                   |             |
| 1.8 MPa, Unannealed                     | > 280 | --                               | °C                | ISO 75-2/A  |
| 8.0 MPa, Unannealed                     | 175   | --                               | °C                | ISO 75-2/C  |

|                                  |               |             |    |                |
|----------------------------------|---------------|-------------|----|----------------|
| Melting Temperature <sup>4</sup> | 342           | --          | °C | DIN EN 11357-1 |
| Flammability                     | Dry           | Conditioned |    | Test Method    |
| Flame Rating (1.60 mm)           | V-0           | --          |    | UL 94          |
| NOTE                             |               |             |    |                |
| 1.                               | 2 mm/min      |             |    |                |
| 2.                               | 2.0 mm/min    |             |    |                |
| 3.                               | 2.0 mm/min    |             |    |                |
| 4.                               | 10 K/min, DSC |             |    |                |

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