

# AKROTEK® PEEK CF 30 black (5049)

Polyetheretherketone

AKRO-PLASTIC GmbH

Message:

AKROTEK® PEEK CF 30 black (5049) is a 30% carbon fibre reinforced polyetheretherketone with high flexural strength and good sliding properties  
Applications are mainly elements in the automotive-, aeronautical-, industrial- and medical engineering that require high strength and high stiffness in a temperature environment above 150°C

| General Information                     |       |                                   |                   |                 |
|-----------------------------------------|-------|-----------------------------------|-------------------|-----------------|
| Filler / Reinforcement                  |       | Carbon Fiber,30% Filler by Weight |                   |                 |
| Features                                |       | High Stiffness                    |                   |                 |
|                                         |       | High Strength                     |                   |                 |
| Uses                                    |       | Aerospace Applications            |                   |                 |
|                                         |       | Automotive Applications           |                   |                 |
|                                         |       | Industrial Applications           |                   |                 |
|                                         |       | Medical/Healthcare Applications   |                   |                 |
| Appearance                              |       | Black                             |                   |                 |
| Resin ID (ISO 1043)                     |       | PEEK CF30                         |                   |                 |
| Physical                                | Dry   | Conditioned                       | Unit              | Test Method     |
| Density (23°C)                          | 1.39  | --                                | g/cm <sup>3</sup> | ISO 1183        |
| Spiral Flow                             | 68.0  | --                                | cm                | Internal Method |
| Humidity Absorption - 62% RH (70°C)     | 0.22  | --                                | %                 | ISO 1110        |
| Flexural Strain at Break <sup>1</sup>   | 1.8   | --                                | %                 | ISO 178         |
| Mechanical                              | Dry   | Conditioned                       | Unit              | Test Method     |
| Tensile Modulus                         | 25500 | 25000                             | MPa               | ISO 527-2/1     |
| Tensile Stress (Break)                  | 235   | 228                               | MPa               | ISO 527-2/5     |
| Tensile Strain (Break)                  | 1.5   | 1.3                               | %                 | ISO 527-2/5     |
| Flexural Modulus <sup>2</sup>           | 23000 | --                                | MPa               | ISO 178         |
| Flexural Stress <sup>3</sup>            | 345   | --                                | MPa               | ISO 178         |
| Impact                                  | Dry   | Conditioned                       | Unit              | Test Method     |
| Charpy Notched Impact Strength (23°C)   | 6.0   | 6.0                               | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy Unnotched Impact Strength (23°C) | 42    | 38                                | 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                     | 230   | --                                | °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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