# PEEK-SGC301F80
## Polyetheretherketone (PEEK)

TECHNICAL DATA SHEET

## Description

Sciengy® PEEK-SGC301F80 is a 30% carbon fiber reinforced PEEK compound, easy flow, developed to provide higher strength, wear resistance, low coefficient of friction and chemical resistant.

CF30%, Easy flow, Standard carbon fiber

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|---|---|
| **Series** | Carbon fiber reinforced |
| **ISO Designation** | >PEEK-CF30< |
| **Process Method** | Injection molding |

## Properties

| **Physical** | **Value** | **Units** | **Test Standard** |
|---|---|---|---|
| Density | 1.40 | g/cm³ | ISO 1183 |
| Mold Shrinkage (Machine Direction) | 0.10 | % | GB/T 15585 |
| Mold Shrinkage (Transverse Direction) | 0.50 | % | GB/T 15585 |
| Water Absorption (24h @23°C) | 0.30 | % | ISO 62 |
| Flammability(1.6 mm) | V-0 | | IEC60695 |
| **Mechanical** | **Value** | **Units** | **Test Standard** |
| Tensile Stress at Break (5 mm/min) | 255 | MPa | ISO 527 |
| Tensile Modulus at Break (1 mm/min) | 28.0 | GPa | ISO 527 |
| Elongation at Break (23℃) | 1.7 | % | ISO 527 |
| Flexural Modulus at Break (23℃) | 25.0 | GPa | ISO 178 |
| Flexural Strength at Break (23℃) | 370 | MPa | ISO 178 |
| Notched Izod Impact Strength @23℃ (V-notched) | 9.0 | kJ/m² | ISO 180 |
| **Thermal** | **Value** | **Units** | **Test Standard** |
| Melting Temperature (10°C/min) | 343 | °C | ISO 11357 |
| Heat Deflection Temp. High Load (1.8 MPa) | 330 | °C | ISO 75 |
| Glass Transition (Tg) | 150 | °C | ISO 11357 |
| Thermal expansion coefficient (T<Tg) along flow | 5.0 | ppm/℃ | ISO 11359 |
| Thermal expansion coefficient (T>Tg) along flow | 40 | ppm/℃ | ISO 11359 |
| Thermal expansion coefficient (T<Tg) across flow | 6.0 | ppm/℃ | ISO 11359 |

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|---|---|---|---|
| Thermal expansion coefficient (T>Tg) across flow | 100 | ppm/℃ | ISO 11359 |
| Thermal conductivity (23℃) | 2.0 | W/mk | ISO 22007-4 |
| **Electrical Properties** | **Value** | **Units** | **Test Standard** |
| **Typical Processing Conditions** | **Value** | **Units** | **Test Standard** |
| Drying Temp. / Time | 150℃&3h or 120℃&5h(residual moisture<0.02%) | | |
| Injection Molding Melt Temp. | 180℃~210℃ | °C | |
| Temperature Settings | 375/385/390/395/395℃(Nozzle) | | |
| Hopper Temperature | Not greater than 100℃ | | |
| Gate | >2mm or 0.5*part thickness | | |

## Disclaimer

Please refer to Material Safety Data before using this product, The information contained in this data sheet is based on tests of research of Sciengy New Materials Co,.Ltd(Sciengy). The user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suited and the information is applicable to the users specific application. Sciengy no warranty is given concerning the accuracy or completeness thereof.