

## Description

Sciengy® PEEK-SG201F20 is a 20% glass fiber reinforced PEEK compound, standard folw, developed to provide high toughness, high temperature resistance, excellent mechanical properties and chemical resistance.

GF20%, Standard

|                        |                        |
|------------------------|------------------------|
| <b>Series</b>          | Glass fiber reinforced |
| <b>ISO Designation</b> | >PEEK-GF20<            |
| <b>Process Method</b>  | Injection molding      |

## Properties

| Physical  | Value | Units             | Test Standard |
|---|-------|-------------------|---------------|
| Density   | 1.45  | g/cm <sup>3</sup> | ISO 1183      |
| Mold Shrinkage (Machine Direction)                            | 0.30  | %                 | GB/T 15585    |
| Mold Shrinkage (Transverse Direction)                         | 0.90  | %                 | GB/T 15585    |
| Water Absorption (23°C-sat)                                   | 0.40  | %                 | ISO 62        |
| Flammability(1.6 mm)  | V-0   |                   | IEC60695      |
| Mechanical  | Value | Units             | Test Standard |
| Tensile Stress at Break (5 mm/min)                            | 160   | MPa               | ISO 527       |
| Elongation at Break (23°C)                                    | 3.5   | %                 | ISO 527       |
| Flexural Modulus at Break (23°C)                              | 8.0   | GPa               | ISO 178       |
| Flexural Strength at Break                                    | 250   | MPa               | ISO178        |
| Charpy Impact Strength @23°C (V-notched)                      | 8.0   | kJ/m <sup>2</sup> | ISO 179       |
| Thermal   | Value | Units             | Test Standard |
| Melting Temperature (10°C/min)                                | 343   | °C                | ISO 11357     |
| Heat Deflection Temp. High Load (1.8 MPa)                     | 315   | °C                | ISO 75        |
| Glass Transition (T <sub>g</sub> )                            | 150   | °C                | ISO 11357     |
| Melt Flow Rate (380°C, 5kg)                                   | 11    | g/10min           | ISO 1133      |
| Thermal expansion coefficient (T<T <sub>g</sub> ) along flow  | 20    | ppm/°C            | ISO 11359     |
| Thermal expansion coefficient (T>T <sub>g</sub> ) along flow  | 45    | ppm/°C            | ISO 11359     |
| Thermal expansion coefficient (T<T <sub>g</sub> ) across flow | 25    | ppm/°C            | ISO 11359     |

# PEEK-SG201F20

## Polyetheretherketone (PEEK)

### TECHNICAL DATA SHEET

|  |   |              |                      |
|--|---|--------------|----------------------|
| Thermal expansion coefficient (T>Tg) across flow | 125   | ppm/°C       | ISO 11359            |
| Thermal conductivity (23°C)                      | 0.3   | W/mk         | ISO 22007-4          |
| <b>Electrical Properties</b>                     | <b>Value</b>  | <b>Units</b> | <b>Test Standard</b> |
| Dielectric Strength (60*60*1mm <sup>3</sup> )    | 23  | KV/mm        | IEC 60243            |
| Relative Permittivity (100Hz&1MHz)               | 3.2   |              | IEC 60250            |
| Dissipation Factor (100Hz&1MHz)                  | 0.004   |              | IEC 60250            |
| Volume Resistivity                               | 10 <sup>16</sup>                                    | Ω·cm         | IEC 60093            |
| Surface Resistivity                              | 10 <sup>16</sup>                                    | Ω            | IEC 60093            |
| CTI  | 150   | V            | IEC 60112            |
| <b>Typical Processing Conditions</b>             | <b>Value</b>  | <b>Units</b> | <b>Test Standard</b> |
| Drying Temp. / Time                              | 150°C&3h or<br>120°C&5h(residual<br>moisture<0.02%) |              |                      |
| Injection Molding Melt Temp.                     | 170°C~200°C   | °C           |                      |
| Temperature Settings                             | 365/370/375/385/385°C(Nozzle)                       |              |                      |
| Hopper Temperature                               | Not greater than<br>100°C                           |              |                      |
| Gate   | >2mm or 0.5*part<br>thickness                       |              |                      |