# China PPS hGR50

Polyphenylene Sulfide

Sichuan Deyang Chemical Co., Ltd

## Message:

PPS-hGR50 is glass reinforced PPS compound, which is filled with glass fiber based on the PPS resin. The characteristic of PPS compounds includes good mechanical properties, high rigidity, high creep resistance, high temperature resistance, flame resistance, chemical resistance, excellent electrical insulation properties, arc resistance, low water absorption, low mold shrinkage, easy processing, good dimensional stability, and radiation resistance. Owing to its high performance, PPS-hGR50 is widely used in space aviation, chemical, electronic appliances, mechanical, automobile, railway fields etc. It can be used to make elements where high temperature resistance, electrical insulation are all important in aviation; anticorrosion valves and electrical insulating parts; precise plugs, outer shells and high temperature resistant contactors; parts of engines, terminal and switch; carburetor, distributor, igniter, slide block, gears, thermocouple, piston rings with requirement of high temperature resistance and precision dimension.

| General Information | | | |
|---|---|---|---|
| Filler / Reinforcement | Glass fiber reinforced material | | |
| Features | Good dimensional stability<br>Low friction coefficient<br>High strength<br>Insulation<br>Anti-arc<br>Anti-gamma radiation<br>Workability, good<br>Good creep resistance<br>Good chemical resistance<br>Heat resistance, high<br>Low shrinkage<br>Flame retardancy | | |
| Uses | Protective cover<br>Electrical/Electronic Applications<br>Electrical components<br>Electrical appliances<br>Aircraft applications<br>Connector<br>Application in Automobile Field | | |
| Processing Method | Injection molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Density | 1.68 | g/cm³ | Internal method |
| Molding Shrinkage | | | Internal method |
| Flow | 0.25 | % | Internal method |
| Transverse flow | 0.75 | % | Internal method |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |

| | | | |
|---|---|---|---|
| Rockwell Hardness [1] | 111 | | Internal method |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength | 176 | MPa | Internal method |
| Tensile Elongation (Break) | 1.9 | % | Internal method |
| Flexural Modulus | 16300 | MPa | Internal method |
| Flexural Strength | 285 | MPa | Internal method |
| Compressive Strength | 135 | MPa | Internal method |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | 13 | $kJ/m^2$ | Internal method |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 267 | °C | Internal method |
| Melting Temperature | 282 | °C | Internal method |
| Electrical | Nominal Value | Unit | Test Method |
| Surface Resistivity | 2.2E+15 | ohms | Internal method |
| Volume Resistivity | 3.4E+16 | ohms·cm | Internal method |
| Dielectric Strength | 17 | kV/mm | Internal method |
| Dielectric Constant (1 MHz) | 4.00 | | Internal method |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating | V-0 | | Internal method |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 110 - 140 | °C | |
| Drying Time | 3.0 - 5.0 | hr | |
| Rear Temperature | 270 - 290 | °C | |
| Middle Temperature | 300 - 320 | °C | |
| Front Temperature | 300 - 320 | °C | |
| Nozzle Temperature | 290 - 320 | °C | |
| Processing (Melt) Temp | 160 - 180 | °C | |
| Mold Temperature | 100 - 150 | °C | |
| Injection Pressure | 50.0 - 100 | MPa | |
| Back Pressure | 0.100 - 1.00 | MPa | |
| Screw Speed | 40 - 100 | rpm | |
| Injection instructions | | | |
| Processing time: 6 to 24hr | | | |
| NOTE | | | |
| 1. | HR | | |



Recommended distributors for this material

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WECHAT