G-PAEK™ 1220FE

Polyether Ketone

Gharda Chemicals Ltd.

Message:

Product Details: Ultra High Performance Thermoplastic polymer, 20% PTFE blended in Polyether Ketone, semi-crystalline granules suitable for injection molding, easy flow, light Beige in color.

Application Areas: Suitable for high temperature applications, where higher strength & less coefficient of Friction in load-bearing applications. e.g. Valve Seats & Mechanical Seals is required. Chemically resistant to aggressive environments, suitable for valve sheet application in ball valves.

| General Information | | | | | |
|----------------------------------|---------------------------------------|-------|-------------|--|--|
| Filler / Reinforcement | PTFE Micropowder,20% Filler by Weight | | | | |
| Features | Good Chemical Resistance | | | | |
| | Good Flow | | | | |
| | Good Strength | | | | |
| | High Heat Resistance | | | | |
| | Semi Crystalline | | | | |
| Uses | High Temperature Applications | | | | |
| | Valves/Valve Parts | | | | |
| | | | | | |
| Appearance | Beige | | | | |
| Forms | Granules | | | | |
| Processing Method | Injection Molding | | | | |
| Physical | Nominal Value | Unit | Test Method | | |
| Density | 1.40 | g/cm³ | | | |
| Molding Shrinkage ¹ | | | | | |
| Flow | 1.4 | % | | | |
| Across Flow | 1.9 | % | | | |
| Water Absorption (23°C, 24 hr) | 0.040 | % | | | |
| Hardness | Nominal Value | Unit | Test Method | | |
| Durometer Hardness (Shore D) | 81 | | ASTM D2240 | | |
| Mechanical | Nominal Value | Unit | Test Method | | |
| Tensile Modulus (23°C) | 3600 | MPa | ASTM D638 | | |
| Tensile Strength (Yield, 23°C) | 85.0 | MPa | ASTM D638 | | |
| Tensile Elongation (Break, 23°C) | 2.0 | % | ASTM D638 | | |
| Flexural Modulus (23°C) | 4100 | MPa | ASTM D790 | | |
| Flexural Strength (23°C) | 164 | MPa | ASTM D790 | | |
| Impact | Nominal Value | Unit | Test Method | | |
| Notched Izod Impact (23°C) | 45 | J/m | ASTM D256 | | |
| Unnotched Izod Impact | No Break | | ASTM D256 | | |
| Thermal | Nominal Value | Unit | Test Method | | |

| Deflection Temperature Under Load (1 | .8 | | |
|--------------------------------------|--------------------------|------|-------------|
| MPa, Unannealed) | 167 | °C | ASTM D648 |
| Continuous Use Temperature | 280 | °C | UL 746B |
| Glass Transition Temperature | 152 | °C | ASTM D3418 |
| Melting Temperature | 372 | °C | ASTM D3418 |
| Flammability | Nominal Value | | Test Method |
| Flame Rating (0.800 mm) | V-0 | | UL 94 |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 150 | °C | |
| Drying Time | 4.0 to 6.0 | hr | |
| Hopper Temperature | 60.0 to 80.0 | °C | |
| Nozzle Temperature | 420 | °C | |
| Processing (Melt) Temp | 390 to 420 | °C | |
| Mold Temperature | 200 to 220 | °C | |
| NOTE | | | |
| 1. | 410°C nozzle, 220°C Mold | | |

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