

KetaSpire® KT-880 FW30 polyetheretherketone

KetaSpire® KT-880 FW30 is a polyetheretherketone (PEEK) compound with higher flow than KetaSpire® KT-820 SL30, making it more suitable for injection molding applications. It is designed to deliver a balance of excellent mechanical properties, wear resistance and low coefficient of friction in both dry and externally lubricated applications. The resin is formulated with anti-friction/anti-wear additive system comprised of carbon fiber and polytetrafluoroethylene (PTFE).

combination of properties, which include excellent wear resistance, best-in-class fatigue resistance, ease of melt processing, high purity, and excellent chemical resistance to organics, acids, and bases.

These properties make it well-suited for applications in transportation, electronics, chemical processing, and industrial uses including oil and gas exploration and production. The resin is black in color in its natural state.

KetaSpire® PEEK is produced to the highest industry standards and is characterized by a distinct

General

| | | |
|---------------------------|---|--|
| Material Status | • Commercial: Active | |
| Availability | • Africa & Middle East • Asia Pacific • Europe | • Latin America • North America |
| Filler / Reinforcement | • Carbon Fiber, 30% Filler by Weight | |
| Features | • Autoclave Sterilizable • Chemical Resistant • E-beam Sterilizable • Ethylene Oxide Sterilizable • Fatigue Resistant • Flame Retardant • Good Dimensional Stability • Good Sterilizability • Heat Sterilizable | • High Flow • High Heat Resistance • High Stiffness • High Strength • Radiation (Gamma) Resistant • Radiation Sterilizable • Steam Resistant • Steam Sterilizable |
| Uses | • Aircraft Applications • Connectors • Dental Applications • Electrical/Electronic Applications • Film • Hospital Goods • Industrial Applications | • Medical Devices • Medical/Healthcare Applications • Oil/Gas Applications • Pump Parts • Seals • Surgical Instruments |
| RoHS Compliance | • Contact Manufacturer | |
| Automotive Specifications | • GM GMW16841P-PEEK-CF15-PTFE15 Color: Natural | |
| Appearance | • Black | |
| Forms | • Pellets | |
| Processing Method | • Injection Molding • Machining | • Profile Extrusion |



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polyetheretherketone

| Physical | Typical Value | Unit | Test method |
|--|------------------|-------------------|-------------|
| Density | 1.45 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (400°C/5.0 kg) | 50 | g/10 min | ASTM D1238 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 0.55 | % | |
| Flow | 0.012 | % | |
| PV Limit ¹ | 300000 to 400000 | psi·fpm | |

| Mechanical | Typical Value | Unit | Test method |
|--------------------------------------|---------------|---------------------------------------|-------------|
| Tensile Modulus | | | |
| -- | 13500 | MPa | ASTM D638 |
| -- | 16000 | MPa | ISO 527-1 |
| Tensile Stress | | | |
| Break | 180 | MPa | ISO 527-2 |
| -- | 194 | MPa | ASTM D638 |
| Tensile Elongation | | | |
| Break | 1.8 | % | ASTM D638 |
| Break | 1.7 | % | ISO 527-2 |
| Flexural Modulus | | | |
| -- | 13500 | MPa | ASTM D790 |
| -- | 13200 | MPa | ISO 178 |
| Flexural Strength | | | |
| -- | 280 | MPa | ASTM D790 |
| -- | 260 | MPa | ISO 178 |
| Compressive Strength | 138 | MPa | ASTM D695 |
| Shear Strength | 83.0 | MPa | ASTM D732 |
| Coefficient of Friction ² | 0.28 | | ASTM D3702 |
| Wear Factor (0.22 MPa, 4.1 m/sec) | 46 | 10 ⁻⁸ mm ³ /N·m | ASTM D3702 |

| Impact | Typical Value | Unit | Test method |
|-----------------------|---------------|-------------------|-------------|
| Notched Izod Impact | | | |
| -- | 68 | J/m | ASTM D256 |
| -- | 7.0 | kJ/m ² | ISO 180 |
| Unnotched Izod Impact | 530 | J/m | ASTM D4812 |

| Hardness | Typical Value | Unit | Test method |
|-------------------|---------------|------|-------------|
| Rockwell Hardness | 99 | | ASTM D785 |

| Thermal | Typical Value | Unit | Test method |
|------------------------------|---------------|------|-------------|
| Glass Transition Temperature | 147 | °C | ISO 11357-2 |
| Melting Temperature | 343 | °C | ISO 11357-3 |

| Fill Analysis | Typical Value | Unit | Test method |
|---|---------------|------|-------------|
| Melt Viscosity (400°C, 1000 sec ⁻¹) | 150 | Pa·s | ASTM D3835 |



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| Injection | Typical Value | Unit |
|-------------------------|--------------------|------|
| Drying Temperature | 150 | °C |
| Drying Time | 4.0 | hr |
| Rear Temperature | 365 | °C |
| Middle Temperature | 370 | °C |
| Front Temperature | 375 | °C |
| Nozzle Temperature | 380 | °C |
| Mold Temperature | 175 to 205 | °C |
| Injection Rate | Fast | |
| Screw Compression Ratio | 2.5:1.0 to 3.5:1.0 | |

Notes

Typical properties: these are not to be construed as specifications.

¹ GMW 16771-Sequence B

² Dry

