

Xencor™ PPA LGF-1930 FW HS polyphthalamide

Xencor™ PPA LGF-1930 FW HS is a 30% long glass fiber reinforced, heat stabilized polyphthalamide PPA, with improved friction & wear properties, high heat deflection temperature, very high flexural modulus and low moisture absorption. It displays an excellent retention of properties in a wide temperature range as well as outstanding creep and fatigue resistance.

Xencor™ PPA LGF-1930 FW HS has a pellet length of 9mm and can be processed on most injection-molding machine.

- Black: Xencor™ PPA LGF-1930 FW HS BK 545-9

General

| | |
|------------------------|--|
| Material Status | • Commercial: Active |
| Availability | • Africa & Middle East • Asia Pacific • Europe • Latin America • North America |
| Filler / Reinforcement | • Long Glass Fiber, 30% Filler by Weight |
| Features | • Creep Resistant • Electrically Insulating • Fatigue Resistant • High Impact Resistance • High Temperature Stiffness • Low CLTE • Low Friction • Low Shrinkage • Low Warp |
| Uses | • Aircraft Applications • Automotive Applications • Consumer Applications • Gears • Industrial Applications |
| RoHS Compliance | • RoHS Compliant |
| Appearance | • Black |
| Forms | • Pellets |
| Processing Method | • Compression Molding • Injection Molding • Overmolding |

| Physical | Dry | Conditioned | Unit | Test method |
|--|------|-------------|-------------------|-----------------|
| Density | 1.55 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage - Flow ¹ | 0.35 | -- | % | Internal Method |
| Water Absorption (Equilibrium, 23°C, 50% RH) | 1.4 | -- | % | ISO 62 |

| Mechanical | Dry | Conditioned | Unit | Test method |
|-----------------|-------|-------------|------|-------------|
| Tensile Modulus | | | | ISO 527-1 |
| 23°C | 12000 | 11500 | MPa | |
| 90°C | 11000 | -- | MPa | |
| 120°C | 9500 | -- | MPa | |



Xencor™ PPA LGF-1930 FW HS polyphthalamide

| Mechanical | Dry | Conditioned | Unit | Test method |
|-------------------------|-------|-------------|--|-------------|
| Tensile Stress | | | | ISO 527-2 |
| Break, 23°C | 205 | 195 | MPa | |
| Break, 90°C | 160 | -- | MPa | |
| Break, 120°C | 135 | -- | MPa | |
| Tensile Strain (Break) | 2.0 | 2.0 | % | ISO 527-2 |
| Flexural Modulus (23°C) | 11200 | 17100 | MPa | ISO 178 |
| Flexural Stress (23°C) | 290 | -- | MPa | ISO 178 |
| Coefficient of Friction | | | | ASTM D3702 |
| Dynamic | 0.22 | -- | | |
| Static | 0.18 | -- | | |
| Wear Factor | 15 | -- | 10 ⁻⁸ mm ³ /N·m | ASTM D3702 |

| Impact | Dry | Conditioned | Unit | Test method |
|---|-----|-------------|-------------------|-------------|
| Charpy Notched Impact Strength (23°C) | 12 | -- | kJ/m ² | ISO 179 |
| Charpy Unnotched Impact Strength (23°C) | 65 | -- | kJ/m ² | ISO 179 |

| Thermal | Dry | Conditioned | Unit | Test method |
|-----------------------------------|--------|-------------|----------|-------------|
| Deflection Temperature Under Load | | | | |
| 0.45 MPa, Unannealed | 300 | -- | °C | ISO 75-2/B |
| 1.8 MPa, Unannealed | 285 | -- | °C | ISO 75-2/A |
| CLTE - Flow | 2.5E-5 | -- | cm/cm/°C | ISO 11359-2 |
| Thermal Conductivity | 0.30 | -- | W/m/K | ISO 22007 |

| Electrical | Dry | Conditioned | Unit | Test method |
|-----------------------------|---------|-------------|---------|-------------|
| Electric Strength (2.00 mm) | 35 | -- | kV/mm | IEC 60243-1 |
| Comparative Tracking Index | 550 | -- | V | IEC 60112 |
| Surface Resistivity | 1.0E+12 | -- | ohms/sq | ASTM D257 |

| Injection | Dry | Unit |
|------------------------|----------------|------|
| Drying Temperature | 120 | °C |
| Drying Time | 4.0 to 8.0 | hr |
| Suggested Max Moisture | 0.030 to 0.060 | % |
| Suggested Max Re grind | 20 | % |
| Rear Temperature | 330 to 340 | °C |
| Middle Temperature | 335 | °C |
| Front Temperature | 335 | °C |
| Nozzle Temperature | 335 to 340 | °C |
| Processing (Melt) Temp | < 340 | °C |
| Mold Temperature | 135 to 160 | °C |



Xencor™ PPA LGF-1930 FW HS

polyphthalamide

Injection Notes

Pre-Drying -- Since polyamides are hygroscopic materials as well as sensitive to moisture during processing, this product should always be pre-dried.

Regrind -- Regrind of highly filled thermoplastic materials, such as this material, should only be recycled with special care. The regrind content must never exceed 20% and only regrind of optimum quality should be used. In any case, part properties should be checked.

Notes

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

¹ Tested in accordance with S.O.P. methods

