

Starflam® PF0047E

 Ascend Performance Materials Operations LLC - *Polyamide 6*
General Information
Product Description

Starflam PF0047E is a 20% glass fiber reinforced, flame retardant PA6 for injection molded applications. The material is halogen free and red phosphorus free.

General

| | |
|------------------------|--|
| Material Status | • Commercial: Active |
| Availability | • Europe • North America |
| Filler / Reinforcement | • Glass Fiber, 20% Filler by Weight |
| Additive | • Flame Retardant • Heat Stabilizer • Mold Release |
| Features | • Bromine Free • Halogen Free • Flame Retardant • Heat Stabilized |
| Agency Ratings | • ISO 1043 PA6 GF20 FR(40) |
| Appearance | • Natural Color |
| Forms | • Pellets |
| Processing Method | • Injection Molding |
| Resin ID | • PA6-GF20 FR |

Properties ¹

| Physical | Dry | Conditioned | Unit | Test Method |
|---|------------|--------------------|-----------------------|--------------------|
| Density | 1.36 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow : 73°F, 0.0787 in | 0.80 | -- | % | |
| Flow : 73°F, 0.0787 in | 0.40 | -- | % | |
| Water Absorption (24 hr, 73°F) | 1.2 | -- | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 50% RH) | 1.5 | -- | % | ISO 62 |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus (73°F) | 1.23E+6 | 769000 | psi | ISO 527-1 |
| Tensile Stress (Break, 73°F) | 17800 | 10300 | psi | ISO 527-2 |
| Tensile Strain (Break, 73°F) | 2.5 | 3.4 | % | ISO 527-2 |
| Flexural Modulus (73°F) | 1.57E+6 | 682000 | psi | ISO 178 |
| Flexural Stress (73°F) | 32300 | 14200 | psi | ISO 178 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -40°F | 2.9 | 2.9 | ft·lb/in ² | |
| -22°F | 2.8 | 3.0 | ft·lb/in ² | |
| 73°F | 3.6 | 5.7 | ft·lb/in ² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -40°F | 19 | 22 | ft·lb/in ² | |
| -22°F | 20 | 24 | ft·lb/in ² | |
| 73°F | 24 | 29 | ft·lb/in ² | |
| Notched Izod Impact Strength | | | | ISO 180/1A |
| -40°F | 2.2 | 3.1 | ft·lb/in ² | |
| -22°F | 2.5 | 3.1 | ft·lb/in ² | |
| 73°F | 3.0 | 4.7 | ft·lb/in ² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed) | 428 | 421 | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 401 | 376 | °F | ISO 75-2/A |
| Melting Temperature | 435 | -- | °F | ISO 11357-3 |



| Electrical | Dry | Conditioned | Unit | Test Method |
|-------------------------------|-----|-------------|-------|-------------|
| Electric Strength (0.0394 in) | 740 | 640 | V/mil | IEC 60243-1 |

Processing Information

| Injection | Dry Unit |
|------------------------|---------------|
| Drying Temperature | 176 °F |
| Drying Time | 4.0 hr |
| Suggested Max Moisture | 0.20 % |
| Rear Temperature | 464 to 482 °F |
| Middle Temperature | 464 to 500 °F |
| Front Temperature | 482 to 518 °F |
| Processing (Melt) Temp | 482 to 518 °F |
| Mold Temperature | 122 to 194 °F |

Notes

¹ Typical properties: these are not to be construed as specifications.

