

Starflam® FR350J BK0802

 Ascend Performance Materials Operations LLC - *Polyamide 66*
General Information
Product Description

Starflam FR350J BK0802 is an unreinforced, halogenated flame-retardant PA66 compound designed with excellent glow wire ignition temperature (GWIT). It exhibits excellent strength and ductility, allowing increased flexibility in product design needed for living hinges and snap fits. FR350J BK0802 provides enhanced flow and is lubricated for machine feed and easy mold release.

General

| | | | |
|-------------------|---|---|--|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Additive | • Flame Retardant • Heat Stabilizer | • Lubricant • Mold Release | |
| Features | • Chemical Resistant • Corrosion Resistant • Flame Retardant • Good Electrical Properties • Good Mold Release | • Good Thermal Stability • Halogenated • Heat Aging Resistant • Heat Stabilized • Heat Stabilized - Organic | • Laser Markable • Laser Weldable • Lubricated |
| Appearance | • Black | | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |
| Resin ID | • PA66 FR | | |

Properties ¹

| Physical | Dry | Conditioned | Unit | Test Method |
|--|--------------------------|--------------------|-----------------------|--------------------|
| Density | 1.32 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow : 73°F, 0.0787 in | 1.7 | -- | % | |
| Flow : 73°F, 0.0787 in | 1.6 | -- | % | |
| Water Absorption (24 hr, 73°F) | 1.3 | -- | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 50% RH) | 1.7 | -- | % | ISO 62 |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus (73°F) | 450000 | 261000 | psi | ISO 527-1 |
| Tensile Stress (Yield, 73°F) | 10000 | 6960 | psi | ISO 527-2 |
| Tensile Stress (Break, 73°F) | 9280 | 6090 | psi | ISO 527-2 |
| Tensile Strain (Yield, 73°F) | 3.9 | 21 | % | ISO 527-2 |
| Tensile Strain (Break, 73°F) | 23 | > 50 | % | ISO 527-2 |
| Flexural Modulus (73°F) | 493000 | 247000 | psi | ISO 178 |
| Flexural Stress (73°F) | 13500 | 5950 | psi | ISO 178 |
| Poisson's Ratio (73°F) | 0.38 | -- | | ISO 527-2 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -40°F | 2.0 | 1.5 | ft·lb/in ² | |
| -22°F | 2.0 | 1.7 | ft·lb/in ² | |
| 73°F | 2.4 | 3.3 | ft·lb/in ² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -40°F | 53 | 53 | ft·lb/in ² | |
| -22°F | 54 | 57 | ft·lb/in ² | |
| 73°F | 56 ft·lb/in ² | No Break | | |
| Notched Izod Impact Strength | | | | ISO 180/1A |
| -40°F | 2.6 | 2.5 | ft·lb/in ² | |
| -22°F | 2.5 | 2.5 | ft·lb/in ² | |



| 73°F | 2.3 | 3.0 | ft·lb/in ² | |
|---|--|--------------------|-----------------------|--------------------|
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed) | 446 | -- | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 176 | -- | °F | ISO 75-2/A |
| Melting Temperature | 500 | -- | °F | ISO 11357-3 |
| CLTE - Flow (73 to 131°F, 0.0787 in) | 3.3E-5 | -- | in/in/°F | ISO 11359-2 |
| CLTE - Transverse (73 to 131°F, 0.0787 in) | 3.4E-5 | -- | in/in/°F | ISO 11359-2 |
| RTI Elec | | | | UL 746B |
| 0.016 in | 266 | -- | °F | |
| 0.030 in | 266 | -- | °F | |
| 0.06 in | 266 | -- | °F | |
| 0.12 in | 266 | -- | °F | |
| RTI Imp | | | | UL 746B |
| 0.016 in | 149 | -- | °F | |
| 0.030 in | 149 | -- | °F | |
| 0.06 in | 149 | -- | °F | |
| 0.12 in | 149 | -- | °F | |
| RTI Str | | | | UL 746B |
| 0.016 in | 230 | -- | °F | |
| 0.030 in | 230 | -- | °F | |
| 0.06 in | 230 | -- | °F | |
| 0.12 in | 230 | -- | °F | |
| Electrical | Dry | Conditioned | Unit | Test Method |
| Electric Strength (0.0394 in) | 740 | 660 | V/mil | IEC 60243-1 |
| High Amp Arc Ignition (HAI) | | | | UL 746A |
| 0.016 in | PLC 0 | -- | | |
| 0.030 in | PLC 0 | -- | | |
| 0.06 in | PLC 0 | -- | | |
| 0.12 in | PLC 0 | -- | | |
| Hot-wire Ignition (HWI) | | | | UL 746A |
| 0.016 in | PLC 0 | -- | | |
| 0.030 in | PLC 0 | -- | | |
| 0.06 in | PLC 0 | -- | | |
| 0.12 in | PLC 0 | -- | | |
| Flammability | Dry | Conditioned | Unit | Test Method |
| Flame Rating | | | | UL 94 |
| 0.016 in | V-0 | -- | | |
| 0.030 in | V-0 | -- | | |
| 0.06 in | <ul style="list-style-type: none"> • V-0 • 5VA | -- | | |
| 0.12 in | <ul style="list-style-type: none"> • V-0 • 5VA | -- | | |
| Glow Wire Flammability Index | | | | IEC 60695-2-12 |
| 0.0079 in | 1760 | -- | °F | |
| 0.016 in | 1760 | -- | °F | |
| 0.030 in | 1760 | -- | °F | |
| 0.06 in | 1760 | -- | °F | |
| 0.12 in | 1760 | -- | °F | |
| Glow Wire Ignition Temperature | | | | IEC 60695-2-13 |
| 0.0079 in | 1760 | -- | °F | |
| 0.016 in | 1760 | -- | °F | |
| 0.030 in | 1760 | -- | °F | |
| 0.06 in | 1760 | -- | °F | |
| 0.12 in | 1760 | -- | °F | |

Processing Information

| Injection | Dry Unit |
|--------------------|-----------------|
| Drying Temperature | 176 °F |
| | 4.0 hr |
| Temperature | 500 to 554 °F |
| Temperature | 500 to 554 °F |
| Temperature | 500 to 554 °F |



| | |
|------------------------|---------------|
| Nozzle Temperature | 500 to 554 °F |
| Processing (Melt) Temp | 518 to 545 °F |
| Mold Temperature | 149 to 203 °F |

