

Radiflam® S FR 308 BK

Radici Group High Performance Polymers - Polyamide 6

General Information

Product Description

PA6 flame retardant injection moulding grade. Halogen and phosphorus free. Black colour.

Suitable for parts where fire retardancy is required. Rated V-0 at 0.4 mm according to UL-94.

General

| | |
|---------------------|---|
| Additive | • Flame Retardant |
| Features | • Flame Retardant • Halogen Free • Low (to None) Phosphorus Content |
| Agency Ratings | • EU 2011/65/EC |
| RoHS Compliance | • RoHS Compliant |
| Appearance | • Black |
| Processing Method | • Injection Molding |
| Resin ID (ISO 1043) | • PA6 FR(30) |

Properties¹

| Physical | Dry | Conditioned | Unit | Test Method |
|--------------------------------------|--------|-------------|-----------------------|-----------------|
| Density | 1.17 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow | 1.0 | -- | % | |
| Flow | 1.0 | -- | % | |
| Water Absorption | | | | ISO 62 |
| Saturation, 73°F, 0.0787 in | 8.0 | -- | % | |
| Water Absorption | | | | ISO 62 |
| Equilibrium, 73°F, 0.0787 in, 50% RH | 2.0 | -- | % | |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus | 493000 | 355000 | psi | ISO 527-1/1A/1 |
| Tensile Stress (Yield) | 10900 | 6530 | psi | ISO 527-2/1A/50 |
| Tensile Strain (Yield) | 4.0 | 28 | % | ISO 527-2/1A/50 |
| Nominal Tensile Strain at Break | 10 | > 50 | % | ISO 527-2/1A/50 |
| Flexural Modulus ² | 493000 | -- | psi | ISO 178 |
| Flexural Stress ² | 16000 | -- | psi | ISO 178 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| 73°F | 2.1 | -- | ft·lb/in ² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load | | | | ISO 75-2/Bf |
| 66 psi, Unannealed | 320 | -- | °F | |
| Deflection Temperature Under Load | | | | ISO 75-2/Af |
| 264 psi, Unannealed | 167 | -- | °F | |
| Vicat Softening Temperature | 383 | -- | °F | ISO 306/B50 |
| Melting Temperature ³ | 428 | -- | °F | ISO 11357-3 |

Radiflam® S FR 308 BK

Radici Group High Performance Polymers - Polyamide 6

| Electrical | Dry | Conditioned | Unit | Test Method |
|--------------------------------|---------|-------------|--------|----------------|
| Surface Resistivity (500 V) | 1.0E+12 | 1.0E+10 | ohms | IEC 62631-3-2 |
| Volume Resistivity (500 V) | 1.0E+13 | 1.0E+11 | ohms·m | IEC 62631-3-1 |
| Comparative Tracking Index | | | | IEC 60112 |
| Solution A | 600 | -- | V | |
| Flammability | Dry | Conditioned | Unit | Test Method |
| Burning Rate (0.118 in) | 0.0 | -- | in/min | ISO 3795 |
| Flame Rating | | | | UL 94 |
| 0.016 in | V-0 | -- | | |
| 0.031 in | V-0 | -- | | |
| Glow Wire Flammability Index | | | | IEC 60695-2-12 |
| 0.04 in | 1760 | -- | °F | |
| 0.08 in | 1760 | -- | °F | |
| Glow Wire Ignition Temperature | | | | IEC 60695-2-13 |
| 0.04 in | 1470 | -- | °F | |
| 0.08 in | 1470 | -- | °F | |

Processing Information

| Injection | Dry | Unit |
|--------------------------------------|------------|------|
| Drying Temperature - Desiccant Dryer | 176 | °F |
| Drying Time - Desiccant Dryer | 2.0 to 4.0 | hr |
| Dew Point - Desiccant Dryer | < -4 | °F |
| Suggested Max Moisture | 0.10 | % |
| Processing (Melt) Temp | 464 to 536 | °F |
| Mold Temperature | 158 to 176 | °F |
| Injection Rate | Moderate | |

Notes

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

² 0.079 in/min

³ 10°C/min