

Technical Data Sheet

Schulamid 6 GF 30 H 31 BLACK



Polyamide 6

Product Description

Schulamid 6 GF 30 H 31 BLACK is a Polyamide 6 Glass Fiber, 30% filled material and is typically used in Injection Molding applications. Features include: Good Toughness, Heat Aging Resistant, High Stiffness, and Oil Resistant.

| | |
|-----------------------------|---|
| Processing Method | Injection Molding |
| Attribute | Good Heat Aging Resistance; Good Toughness; High Stiffness; Oil Resistant |
| Filler/Reinforcement | Glass Fiber, 30% |

| Typical Properties | Nominal Value | Units | Test Method |
|--|---------------|--------------------|-------------|
| Physical | | | |
| Density, (Method A) | 1.35 | g/cm ³ | ISO 1183 |
| Viscosity Number | 145 | cm ³ /g | ISO 307 |
| Mechanical | | | |
| Flexural Strain at Flexural Strength | 3.7 | % | ISO 178 |
| Tensile Strain at Break | | | |
| (Type 1A, 5 mm/min) | 3.5 | % | ISO 527-2 |
| (Type 1A, 5 mm/min) - Conditioned | 8.0 | % | ISO 527-2 |
| Flexural Modulus | 7800 | MPa | ISO 178 |
| Tensile Stress at Break | | | |
| (Type 1A, 5 mm/min) | 170 | MPa | ISO 527-2 |
| (Type 1A, 5 mm/min) - Conditioned | 100 | MPa | ISO 527-2 |
| Tensile Modulus | | | |
| (1 mm/min, Type 1A) | 9500 | MPa | ISO 527-1 |
| (1 mm/min, Type 1A) - Conditioned | 5000 | MPa | ISO 527-1 |
| Flexural Stress | 210 | MPa | ISO 178 |
| Impact | | | |
| Charpy Impact Strength - Notched | | | |
| (23 °C, Type 1, Edgewise, Notch A) | 12 | kJ/m ² | ISO 179 |
| (-30 °C, Type 1, Edgewise, Notch A) | 9.0 | kJ/m ² | ISO 179 |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 30 | kJ/m ² | ISO 179 |
| Charpy Impact Strength - Unnotched | | | |
| (23 °C, Type 1, Edgewise) | 80 | kJ/m ² | ISO 179 |
| (-30 °C, Type 1, Edgewise) | 60 | kJ/m ² | ISO 179 |
| (23 °C, Type 1, Edgewise) - Conditioned | No Break | | ISO 179 |
| Hardness | | | |
| Ball Indentation Hardness, (H 358/30) | 200 | MPa | ISO 2039-1 |

Thermal

| | | | |
|---|-----|----|------------|
| Vicat Softening Temperature | | | |
| (B (50N), 50 °C/h) | 210 | °C | ISO 306 |
| (A (10N), 50 °C/h) | 217 | °C | ISO 306 |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 220 | °C | ISO 75-2/B |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 205 | °C | ISO 75-2/A |
| RTI Elec | | | |
| (1.5 mm) | 125 | °C | UL 746B |
| (3.0 mm) | 125 | °C | UL 746B |
| (0.75 mm) | 125 | °C | UL 746B |
| RTI Imp | | | |
| (1.5 mm) | 120 | °C | UL 746B |
| (3.0 mm) | 125 | °C | UL 746B |
| (0.75 mm) | 115 | °C | UL 746B |
| RTI Str | | | |
| (1.5 mm) | 130 | °C | UL 746B |
| (3.0 mm) | 130 | °C | UL 746B |
| (0.75 mm) | 130 | °C | UL 746B |

Electrical

| | | | |
|----------------------------------|----------|-------|---------------|
| Volume Resistivity | >1.0E+13 | ohm*m | IEC 62631-3-1 |
| - Conditioned | >1.0E+10 | ohm*m | IEC 62631-3-1 |
| Comparative Tracking Index (CTI) | 450 | V | IEC 60112 |
| Surface Resistivity | >1.0E+15 | ohm | IEC 60093 |
| - Conditioned | >1.0E+12 | ohm | IEC 60093 |

Flammable

| | | | |
|--------------|----|--------|-----------|
| Burning Rate | | | |
| (2.00 mm) | 30 | mm/min | FMVSS 302 |
| (2.00 mm) | 30 | mm/min | ISO 3795 |

Additional Information

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|---------------------------|---|---|--------|
| Water Absorption 23C/50RH | 2 | % | ISO 62 |
|---------------------------|---|---|--------|

UL Information

| | | | |
|-----------------------------|--------|--|----------------------|
| Flammability Classification | | | |
| (0.75 mm) | HB | | IEC 60695-11-10, -20 |
| (1.5 mm) | HB | | IEC 60695-11-10, -20 |
| (3.0 mm) | HB | | IEC 60695-11-10, -20 |
| UL File Number | E86615 | | |

Injection Parameters

| | Nominal Value | Units |
|---------------------------------------|---------------|-------|
| Drying Time | 3.0 to 4.0 | hr |
| Drying Temperature, (Desiccant Dryer) | 80 | °C |
| Suggested Max Moisture | 0.040 to 0.10 | % |
| Processing (Melt) Temp | 250 to 280 | °C |
| Mold Temperature | 60 to 100 | °C |