

Technical Data Sheet

Schulamid 6 GF30 FR2 RED 964206

Polyamide 6

Product Description

30% glass fibre reinforced flame-retardant Polyamide 6 grade; halogen free, heat stabilized.

| | |
|-----------------------------|-------------------------|
| Processing Method | Injection Molding |
| Attribute | Halogen Free; PFAS free |
| Additive | Flame Retardant |
| Filler/Reinforcement | Glass Fiber, 30% |
| Resin ID | PA6 GF30 FR(40) |

| Typical Properties | Nominal Value | Units | Test Method |
|--|---------------|--------------------|----------------|
| Physical | | | |
| Density, (Method A) | 1.41 | g/cm ³ | ISO 1183 |
| Viscosity Number | 145 | cm ³ /g | ISO 307 |
| Mechanical | | | |
| Tensile Strain at Break | | | |
| (Type 1A, 5 mm/min) | 3.5 | % | ISO 527-2 |
| (Type 1A, 5 mm/min) - Conditioned | 6.0 | % | ISO 527-2 |
| Tensile Stress at Break | | | |
| (Type 1A, 5 mm/min) | 160 | MPa | ISO 527-2 |
| (Type 1A, 5 mm/min) - Conditioned | 95.0 | MPa | ISO 527-2 |
| Tensile Modulus | | | |
| (1 mm/min, Type 1A) | 11100 | MPa | ISO 527-1 |
| (1 mm/min, Type 1A) - Conditioned | 6500 | MPa | ISO 527-1 |
| 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 | 16 | 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 | 80 | kJ/m ² | ISO 179 |
| Hardness | | | |
| Ball Pressure Test, (200 °C) | Pass | | IEC 60695-10-2 |
| Thermal | | | |

| | | | |
|---|----------|--------|----------------------|
| Vicat Softening Temperature | | | |
| (B (50N), 50 °C/h) | 203 | °C | ISO 306 |
| (A (10N), 50 °C/h) | 212 | °C | ISO 306 |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 215 | °C | ISO 75-2/B |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 204 | °C | ISO 75-2/A |
| Electrical | | | |
| Volume Resistivity | >1.0E+13 | ohm*m | IEC 62631-3-1 |
| - Conditioned | >1.0E+10 | ohm*m | IEC 62631-3-1 |
| Dielectric Strength, (in Oil, 1.00 mm, 23 °C, 2000 V/sec) | 28 | kV/mm | IEC 60243-1 |
| Comparative Tracking Index (CTI) | 500 | V | IEC 60112 |
| Surface Resistivity | >1.0E+15 | ohm | IEC 60093 |
| - Conditioned | >1.0E+12 | ohm | IEC 60093 |
| Flammable | | | |
| Burning Rate | | | |
| (0.750 mm, Self-Extinguishing) | 0.0 | mm/min | ISO 3795 |
| (1.50 mm, Self-Extinguishing) | 0.0 | mm/min | ISO 3795 |
| (3.00 mm, Self-Extinguishing) | 0.0 | mm/min | ISO 3795 |
| Glow Wire Flammability Index | | | |
| (0.75 mm) | 960 | °C | IEC 60695-2-12 |
| (1.5 mm) | 960 | °C | IEC 60695-2-12 |
| (3.0 mm) | 960 | °C | IEC 60695-2-12 |
| Glow Wire Ignition Temperature | | | |
| (0.75 mm) | 750 | °C | IEC 60695-2-13 |
| (1.5 mm) | 750 | °C | IEC 60695-2-13 |
| (3.0 mm) | 750 | °C | IEC 60695-2-13 |
| Oxygen Index | 32 | % | ISO 4589-2 |
| UL Information | | | |
| Flammability Classification | | | |
| (0.75 mm) | V-0 | | IEC 60695-11-10, -20 |
| (1.5 mm) | V-0 | | IEC 60695-11-10, -20 |
| (3.0 mm) | V-0 | | IEC 60695-11-10, -20 |
| UL File Number | E344659 | | |

| Injection Parameters | Nominal Value | Units |
|-----------------------------|----------------------|--------------|
| Drying Time | 4.0 to 6.0 | hr |
| Drying Temperature | 80 | °C |
| Suggested Max Moisture | 0.040 to 0.10 | % |
| Screw Speed | <250 | mm/sec |
| Processing (Melt) Temp | 240 to 260 | °C |
| Injection Rate | Slow-Moderate | |
| Back Pressure | 20 to 80 | bar |
| Mold Temperature | 60 to 90 | °C |