

## Technical Data Sheet

### Schulamid 66 GF 30H-31 BLACK



Polyamide 66

#### Product Description

30% glass fiber reinforced, heat stabilized Polyamide 66

**Processing Method** Injection Molding

**Attribute** Good Heat Aging Resistance; Good Stiffness/Impact Balance; Medium Viscosity; Oil Resistant

**Filler/Reinforcement** Glass Fiber, 30%

| Typical Properties                               | Nominal Value | Units              | Test Method |
|--------------------------------------------------|---------------|--------------------|-------------|
| <b>Physical</b>                                  |               |                    |             |
| Density, (Method A)                              | 1.36          | g/cm <sup>3</sup>  | ISO 1183    |
| Viscosity Number                                 | 145           | cm <sup>3</sup> /g | ISO 307     |
| <b>Mechanical</b>                                |               |                    |             |
| Tensile Strain at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 3.0           | %                  | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 7.0           | %                  | ISO 527-2   |
| Tensile Stress at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 175           | MPa                | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 110           | MPa                | ISO 527-2   |
| Tensile Modulus                                  |               |                    |             |
| (1 mm/min, Type 1A)                              | 10000         | MPa                | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 6200          | MPa                | ISO 527-1   |
| <b>Impact</b>                                    |               |                    |             |
| Charpy Impact Strength - Notched                 |               |                    |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 10            | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 7.0           | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 18            | kJ/m <sup>2</sup>  | ISO 179     |
| Charpy Impact Strength - Unnotched               |               |                    |             |
| (23 °C, Type 1, Edgewise)                        | 80            | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise)                       | 60            | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise) - Conditioned          | 95            | kJ/m <sup>2</sup>  | ISO 179     |
| <b>Thermal</b>                                   |               |                    |             |
| Vicat Softening Temperature                      |               |                    |             |
| (B (50N), 50 °C/h)                               | >250          | °C                 | ISO 306     |
| (A (10N), 50 °C/h)                               | >250          | °C                 | ISO 306     |

|                                                                        |      |    |            |
|------------------------------------------------------------------------|------|----|------------|
| Deflection Temperature Under Load Unannealed (0.45 MPa),<br>(Flatwise) | >250 | °C | ISO 75-2/B |
| Deflection Temperature Under Load Unannealed (1.80 MPa),<br>(Flatwise) | 245  | °C | ISO 75-2/A |
| RTI Elec                                                               |      |    |            |
| (1.5 mm)                                                               | 120  | °C | UL 746B    |
| (3.0 mm)                                                               | 120  | °C | UL 746B    |
| (0.75 mm)                                                              | 120  | °C | UL 746B    |
| RTI Imp                                                                |      |    |            |
| (1.5 mm)                                                               | 105  | °C | UL 746B    |
| (3.0 mm)                                                               | 115  | °C | UL 746B    |
| (0.75 mm)                                                              | 100  | °C | UL 746B    |
| RTI Str                                                                |      |    |            |
| (1.5 mm)                                                               | 120  | °C | UL 746B    |
| (3.0 mm)                                                               | 130  | °C | UL 746B    |
| (0.75 mm)                                                              | 110  | °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       |
| Glow Wire Flammability Index |     |        |                |
| (1.5 mm)                     | 650 | °C     | IEC 60695-2-12 |
| (3.0 mm)                     | 650 | °C     | IEC 60695-2-12 |

#### Additional Information

|                           |     |   |        |
|---------------------------|-----|---|--------|
| Water Absorption 23C/50RH | 1.7 | % | 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     | 80            | °C    |
| Suggested Max Moisture | 0.040 to 0.10 | %     |
| Processing (Melt) Temp | 280 to 300    | °C    |
| Mold Temperature       | 60 to 120     | °C    |