

## Technical Data Sheet

### Schulamid 6 GB 30 BLK

Polyamide 6

#### Product Description

Schulamid 6 GB 30 BLK is a Polyamide 6 Glass Bead, 30% filled material and is typically used in Injection Molding applications. Features include: Good Dimensional Stability, Good Surface Finish, Low Warpage, and Oil Resistant.

|                      |                                                                             |
|----------------------|-----------------------------------------------------------------------------|
| Processing Method    | Injection Molding                                                           |
| Attribute            | Good Dimensional Stability; Good Surface Finish; Low Warpage; Oil Resistant |
| Filler/Reinforcement | Glass Bead, 30%                                                             |
| Resin ID             | PA6-GB30                                                                    |

| 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>                                |               |                    |             |
| Flexural Strain at Flexural Strength             | 6.5           | %                  | ISO 178     |
| Tensile Strain at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 10            | %                  | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 50            | %                  | ISO 527-2   |
| Flexural Modulus                                 | 3000          | MPa                | ISO 178     |
| Tensile Stress at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 70.0          | MPa                | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 34.0          | MPa                | ISO 527-2   |
| Tensile Modulus                                  |               |                    |             |
| (1 mm/min, Type 1A)                              | 4000          | MPa                | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 1200          | MPa                | ISO 527-1   |
| Flexural Stress                                  | 100           | MPa                | ISO 178     |
| <b>Impact</b>                                    |               |                    |             |
| Charpy Impact Strength - Notched                 |               |                    |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 4.0           | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 3.0           | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 14            | kJ/m <sup>2</sup>  | ISO 179     |
| Charpy Impact Strength - Unnotched               |               |                    |             |
| (23 °C, Type 1, Edgewise)                        | 35            | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise)                       | 28            | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise) - Conditioned          | No Break      |                    | ISO 179     |
| <b>Hardness</b>                                  |               |                    |             |

|                              |      |     |                |
|------------------------------|------|-----|----------------|
| Ball Indentation Hardness    |      |     |                |
| (H 358/30)                   | 165  | MPa | ISO 2039-1     |
| (H 358/30) - Conditioned     | 105  | MPa | ISO 2039-1     |
| Ball Pressure Test, (105 °C) | Pass |     | IEC 60695-10-2 |

#### Thermal

|                                                                     |      |    |            |
|---------------------------------------------------------------------|------|----|------------|
| Vicat Softening Temperature                                         |      |    |            |
| (B (50N), 50 °C/h)                                                  | 200  | °C | ISO 306    |
| (A (10N), 50 °C/h)                                                  | 215  | °C | ISO 306    |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 180  | °C | ISO 75-2/B |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 68.0 | °C | ISO 75-2/A |
| RTI Elec                                                            |      |    |            |
| (1.5 mm)                                                            | 65.0 | °C | UL 746B    |
| (3.0 mm)                                                            | 65.0 | °C | UL 746B    |
| RTI Imp                                                             |      |    |            |
| (1.5 mm)                                                            | 65.0 | °C | UL 746B    |
| (3.0 mm)                                                            | 65.0 | °C | UL 746B    |
| RTI Str                                                             |      |    |            |
| (1.5 mm)                                                            | 65.0 | °C | UL 746B    |
| (3.0 mm)                                                            | 65.0 | °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)                    | 80  | mm/min | FMVSS 302      |
| (2.00 mm)                    | 80  | 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 | 1.9 | % | ISO 62 |
|---------------------------|-----|---|--------|

#### UL Information

|                             |        |  |                      |
|-----------------------------|--------|--|----------------------|
| Flammability Classification |        |  |                      |
| (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 |  | 250 to 280    | °C    |
| Mold Temperature       |  | 60 to 100     | °C    |