

## Technical Data Sheet

### Schulamid 66 SK1000 BLK968001 EXP



Polyamide 66

#### Product Description

Schulamid 66 SK1000 BLK968001 EXP is a Polyamide 66 material and is typically used in Injection Molding applications. Features include: Low Temperature Toughness, Medium Viscosity, Oil Resistant, Ultra High Impact Resistance, and Ultra High Toughness.

**Processing Method** Injection Molding

**Attribute** Low Temperature Toughness; Medium Viscosity; Oil Resistant; Ultra High Impact Resistance; Ultra High Toughness

**Resin ID** PA66-HI

| Typical Properties                               | Nominal Value | Units             | Test Method |
|--------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                  |               |                   |             |
| Density, (Method A)                              | 1.07          | g/cm <sup>3</sup> | ISO 1183    |
| <b>Mechanical</b>                                |               |                   |             |
| Flexural Strain at Flexural Strength             | 7             | %                 | ISO 178     |
| Tensile Stress at Yield                          |               |                   |             |
| (Type 1A, 50 mm/min)                             | 50.0          | MPa               | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 30.0          | MPa               | ISO 527-2   |
| Nominal Tensile Strain at Break                  |               |                   |             |
| (50 mm/min, Type 1A) - Conditioned               | >100          | %                 | ISO 527-2   |
| (50 mm/min, Type 1A)                             | >40           | %                 | ISO 527-2   |
| Flexural Modulus, (2.0 mm/min)                   | 1650          | MPa               | ISO 178     |
| Tensile Strain at Yield                          |               |                   |             |
| (Type 1A, 50 mm/min)                             | 7.0           | %                 | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 32            | %                 | ISO 527-2   |
| Tensile Modulus                                  |               |                   |             |
| (1 mm/min, Type 1A)                              | 1800          | MPa               | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 600           | MPa               | ISO 527-1   |
| Flexural Stress, (2.0 mm/min)                    | 62.0          | MPa               | ISO 178     |
| <b>Impact</b>                                    |               |                   |             |
| Charpy Impact Strength - Notched                 |               |                   |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 75            | kJ/m <sup>2</sup> | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 25            | kJ/m <sup>2</sup> | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 120           | kJ/m <sup>2</sup> | ISO 179     |

|                                                                     |                |  |                      |
|---------------------------------------------------------------------|----------------|--|----------------------|
| Charpy Impact Strength - Unnotched                                  |                |  |                      |
| (23 °C, Type 1, Edgewise)                                           | No Break       |  | ISO 179              |
| (-30 °C, Type 1, Edgewise)                                          | No Break       |  | ISO 179              |
| (23 °C, Type 1, Edgewise) - Conditioned                             | No Break       |  | ISO 179              |
| <b>Thermal</b>                                                      |                |  |                      |
| Vicat Softening Temperature                                         |                |  |                      |
| (B (50N), 50 °C/h)                                                  | 175 °C         |  | ISO 306              |
| (A (10N), 50 °C/h)                                                  | >250 °C        |  | ISO 306              |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 135 °C         |  | ISO 75-2/B           |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 60.0 °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              |
| <b>Electrical</b>                                                   |                |  |                      |
| Volume Resistivity                                                  | >1.0E+13 ohm*m |  | IEC 62631-3-1        |
| - Conditioned                                                       | >1.0E+10 ohm*m |  | IEC 62631-3-1        |
| Surface Resistivity                                                 | >1.0E+15 ohm   |  | IEC 60093            |
| - Conditioned                                                       | >1.0E+12 ohm   |  | IEC 60093            |
| <b>Flammable</b>                                                    |                |  |                      |
| Burning Rate                                                        |                |  |                      |
| (2.00 mm)                                                           | 38 mm/min      |  | FMVSS 302            |
| (2.00 mm)                                                           | 38 mm/min      |  | ISO 3795             |
| Glow Wire Flammability Index                                        |                |  |                      |
| (1.5 mm)                                                            | 600 °C         |  | IEC 60695-2-12       |
| (3.0 mm)                                                            | 600 °C         |  | IEC 60695-2-12       |
| <b>Additional Information</b>                                       |                |  |                      |
| Water Absorption 23C/50RH                                           | 2 %            |  | ISO 62               |
| <b>UL Information</b>                                               |                |  |                      |
| 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 | 270 to 290    | °C    |
| Mold Temperature       | 60 to 100     | °C    |