

## Technical Data Sheet

### Schulamid 6 MV SHI U BUE965057



Polyamide 6

#### Product Description

High impact modified Polyamide 6

**Processing Method** Injection Molding

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

**Resin ID** PA6-I

| Typical Properties                               | Nominal Value | Units             | Test Method |
|--------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                  |               |                   |             |
| Density, (Method A)                              | 1.08          | g/cm <sup>3</sup> | ISO 1183    |
| <b>Mechanical</b>                                |               |                   |             |
| 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)                             | >50           | %                 | ISO 527-2   |
| Tensile Strain at Yield                          |               |                   |             |
| (Type 1A, 50 mm/min)                             | 4.0           | %                 | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 25            | %                 | 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   |
| <b>Impact</b>                                    |               |                   |             |
| Charpy Impact Strength - Notched                 |               |                   |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 50            | 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 | No Break      |                   | 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)                               | 165           | °C                | ISO 306     |
| (A (10N), 50 °C/h)                               | 210           | °C                | ISO 306     |

|                                                                        |      |    |            |
|------------------------------------------------------------------------|------|----|------------|
| Deflection Temperature Under Load Unannealed (0.45 MPa),<br>(Flatwise) | 125  | °C | ISO 75-2/B |
| Deflection Temperature Under Load Unannealed (1.80 MPa),<br>(Flatwise) | 50.0 | °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 |
| Surface Resistivity | >1.0E+15 | ohm   | IEC 60093     |
| - Conditioned       | >1.0E+12 | ohm   | IEC 60093     |

#### Flammable

|              |      |        |           |
|--------------|------|--------|-----------|
| Burning Rate |      |        |           |
| (2.00 mm)    | <100 | mm/min | ISO 3795  |
| (2.00 mm)    | <100 | mm/min | FMVSS 302 |

#### Additional Information

|                           |     |   |        |
|---------------------------|-----|---|--------|
| Water Absorption 23C/50RH | 2.3 | % | 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 | 250 to 270    | °C    |
| Mold Temperature       | 60 to 90      | °C    |