

## Technical Data Sheet

### Schulamid 6 MV 14 FR 4 K1681 BLK 968076



Polyamide 6

#### Product Description

Medium viscosity flame-retardant Polyamide 6 grade (V-2); without PBDE

Processing Method Injection Molding

Resin ID PA6 FR(17+30)

| Typical Properties                                                  | Nominal Value      | Units              | Test Method   |
|---------------------------------------------------------------------|--------------------|--------------------|---------------|
| <b>Physical</b>                                                     |                    |                    |               |
| Density, (Method A)                                                 | 1.26               | g/cm <sup>3</sup>  | ISO 1183      |
| Viscosity Number                                                    | 130                | cm <sup>3</sup> /g | ISO 307       |
| <b>Mechanical</b>                                                   |                    |                    |               |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                       | 60.0               | MPa                | ISO 527-2     |
| Tensile Strain at Yield, (Type 1A, 50 mm/min)                       | 4.0                | %                  | ISO 527-2     |
| Tensile Modulus, (1 mm/min, Type 1A)                                | 3200               | MPa                | ISO 527-1     |
| <b>Impact</b>                                                       |                    |                    |               |
| Charpy Impact Strength - Notched                                    |                    |                    |               |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 4.7                | kJ/m <sup>2</sup>  | ISO 179       |
| (-30 °C, Type 1, Edgewise, Notch A)                                 | 4.3                | kJ/m <sup>2</sup>  | ISO 179       |
| Charpy Impact Strength - Unnotched                                  |                    |                    |               |
| (23 °C, Type 1, Edgewise)                                           | 55                 | kJ/m <sup>2</sup>  | ISO 179       |
| (-30 °C, Type 1, Edgewise)                                          | 38                 | kJ/m <sup>2</sup>  | ISO 179       |
| <b>Thermal</b>                                                      |                    |                    |               |
| Vicat Softening Temperature                                         |                    |                    |               |
| (B (50N), 50 °C/h)                                                  | 195                | °C                 | ISO 306       |
| (A (10N), 50 °C/h)                                                  | 211                | °C                 | ISO 306       |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 178                | °C                 | ISO 75-2/B    |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 70.0               | °C                 | ISO 75-2/A    |
| <b>Electrical</b>                                                   |                    |                    |               |
| Volume Resistivity                                                  | 1000000000<br>0000 | ohm*m              | IEC 62631-3-1 |
| Comparative Tracking Index (CTI)                                    | 300                | V                  | IEC 60112     |
| Surface Resistivity                                                 | 1E+15              | ohm                | IEC 60093     |
| <b>Flammable</b>                                                    |                    |                    |               |

|                                |        |    |                      |
|--------------------------------|--------|----|----------------------|
| Glow Wire Flammability Index   |        |    |                      |
| (0.75 mm)                      | 930    | °C | IEC 60695-2-12       |
| (1.5 mm)                       | 960    | °C | IEC 60695-2-12       |
| (3.0 mm)                       | 960    | °C | IEC 60695-2-12       |
| (0.38 mm)                      | 960    | °C | IEC 60695-2-12       |
| Glow Wire Ignition Temperature |        |    |                      |
| (0.75 mm)                      | 930    | °C | IEC 60695-2-13       |
| (1.5 mm)                       | 825    | °C | IEC 60695-2-13       |
| (3.0 mm)                       | 825    | °C | IEC 60695-2-13       |
| (0.38 mm)                      | 930    | °C | IEC 60695-2-13       |
| Oxygen Index                   | 22     | %  | ISO 4589-2           |
| <b>UL Information</b>          |        |    |                      |
| Flame Rating                   |        |    |                      |
| (1.6 mm)                       | V-2    |    | UL 94                |
| (3.2 mm)                       | V-2    |    | UL 94                |
| (0.8 mm)                       | V-2    |    | UL 94                |
| (0.40 mm)                      | V-2    |    | UL 94                |
| Flammability Classification    |        |    |                      |
| (0.40 mm)                      | V-2    |    | IEC 60695-11-10, -20 |
| (0.8 mm)                       | V-2    |    | IEC 60695-11-10, -20 |
| (1.6 mm)                       | V-2    |    | IEC 60695-11-10, -20 |
| (3.2 mm)                       | V-2    |    | IEC 60695-11-10, -20 |
| UL File Number                 | E86615 |    |                      |

| <b>Injection Parameters</b> |  | <b>Nominal Value</b> | <b>Units</b> |
|-----------------------------|--|----------------------|--------------|
| Drying Time                 |  | 4.0 to 6.0           | hr           |
| Drying Temperature          |  | 80                   | °C           |
| Suggested Max Moisture      |  | 0.1                  | %            |
| 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           |