

## Technical Data Sheet

### Schulamid 6 GF30 H NAT



Polyamide 6

#### Product Description

Schulamid 6 GF30 H NAT is a Polyamide 6 Glass Fiber, 30% filled material and is typically used in Injection Molding applications. Features include: Good Toughness, Heat Aging Resistant, High Stiffness, and Oil Resistant.

**Processing Method** Injection Molding

**Attribute** Good Heat Aging Resistance; Good Toughness; High Stiffness; Oil Resistant

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

| Typical Properties                               | Nominal Value | Units              | Test Method |
|--------------------------------------------------|---------------|--------------------|-------------|
| <b>Physical</b>                                  |               |                    |             |
| Density, (Method A)                              | 1.35          | 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             | 3.7           | %                  | ISO 178     |
| Tensile Strain at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 3.5           | %                  | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 8.0           | %                  | ISO 527-2   |
| Flexural Modulus                                 | 7800          | MPa                | ISO 178     |
| Tensile Stress at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 170           | MPa                | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 100           | MPa                | ISO 527-2   |
| Tensile Modulus                                  |               |                    |             |
| (1 mm/min, Type 1A)                              | 9500          | MPa                | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 5000          | MPa                | ISO 527-1   |
| Flexural Stress                                  | 210           | MPa                | ISO 178     |
| <b>Impact</b>                                    |               |                    |             |
| Charpy Impact Strength - Notched                 |               |                    |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 12            | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 9.0           | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 30            | 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          | No Break      |                    | ISO 179     |
| <b>Hardness</b>                                  |               |                    |             |
| Ball Indentation Hardness, (H 358/30)            | 200           | MPa                | ISO 2039-1  |

|                                                                     |          |        |                      |
|---------------------------------------------------------------------|----------|--------|----------------------|
| <b>Thermal</b>                                                      |          |        |                      |
| Vicat Softening Temperature                                         |          |        |                      |
| (B (50N), 50 °C/h)                                                  | 210      | °C     | ISO 306              |
| (A (10N), 50 °C/h)                                                  | 217      | °C     | ISO 306              |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 220      | °C     | ISO 75-2/B           |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 205      | °C     | ISO 75-2/A           |
| RTI Elec                                                            |          |        |                      |
| (1.5 mm)                                                            | 125      | °C     | UL 746B              |
| (3.0 mm)                                                            | 125      | °C     | UL 746B              |
| (0.75 mm)                                                           | 125      | °C     | UL 746B              |
| RTI Imp                                                             |          |        |                      |
| (1.5 mm)                                                            | 120      | °C     | UL 746B              |
| (3.0 mm)                                                            | 125      | °C     | UL 746B              |
| (0.75 mm)                                                           | 115      | °C     | UL 746B              |
| RTI Str                                                             |          |        |                      |
| (1.5 mm)                                                            | 130      | °C     | UL 746B              |
| (3.0 mm)                                                            | 130      | °C     | UL 746B              |
| (0.75 mm)                                                           | 130      | °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        |
| Comparative Tracking Index (CTI)                                    | 450      | V      | IEC 60112            |
| Surface Resistivity                                                 | >1.0E+15 | ohm    | IEC 60093            |
| - Conditioned                                                       | >1.0E+12 | ohm    | IEC 60093            |
| <b>Flammable</b>                                                    |          |        |                      |
| Burning Rate                                                        |          |        |                      |
| (2.00 mm)                                                           | 30       | mm/min | FMVSS 302            |
| (2.00 mm)                                                           | 30       | mm/min | ISO 3795             |
| <b>Additional Information</b>                                       |          |        |                      |
| Water Absorption 23C/50RH                                           | 2        | %      | ISO 62               |
| <b>UL Information</b>                                               |          |        |                      |
| 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   |        |                      |

| <b>Injection Parameters</b>           | <b>Nominal Value</b> | <b>Units</b> |
|---------------------------------------|----------------------|--------------|
| Drying Time                           | 3.0 to 4.0           | hr           |
| Drying Temperature, (Desiccant Dryer) | 80                   | °C           |
| Suggested Max Moisture                | 0.040 to 0.10        | %            |
| Processing (Melt) Temp                | 250 to 280           | °C           |
| Mold Temperature                      | 60 to 100            | °C           |