

## Technical Data Sheet

### Schulamid 612 GF65 H IS BLK



Polyamide 612

#### Product Description

65% glass fiber reinforced, Polyamide 612 compound, heat stabilized, improved surface finish with very high strength after conditioning

|                             |                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------|
| <b>Processing Method</b>    | Gas-Assisted Injection Molding; Injection Molding; Water-Assisted Injection Molding |
| <b>Attribute</b>            | Good Chemical Resistance; Good Heat Aging Resistance; Good Surface Finish           |
| <b>Filler/Reinforcement</b> | Glass Fiber, 50%                                                                    |

| Typical Properties                                                  | Nominal Value | Units              | Test Method |
|---------------------------------------------------------------------|---------------|--------------------|-------------|
| <b>Physical</b>                                                     |               |                    |             |
| Density, (Method A)                                                 | 1.74          | g/cm <sup>3</sup>  | ISO 1183    |
| Viscosity Number, (H <sub>2</sub> SO <sub>4</sub> (Sulphuric Acid)) | 110           | cm <sup>3</sup> /g | ISO 307     |
| <b>Mechanical</b>                                                   |               |                    |             |
| Tensile Strain at Break                                             |               |                    |             |
| (Type 1A, 5 mm/min)                                                 | 2.1           | %                  | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                                   | 2.6           | %                  | ISO 527-2   |
| Flexural Modulus, (23 °C, 2.0 mm/min)                               | 24000         | MPa                | ISO 178     |
| Tensile Stress at Break                                             |               |                    |             |
| (Type 1A, 5 mm/min)                                                 | 250           | MPa                | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                                   | 220           | MPa                | ISO 527-2   |
| Tensile Modulus                                                     |               |                    |             |
| (1 mm/min, Type 1A)                                                 | 21500         | MPa                | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                                   | 20500         | MPa                | ISO 527-1   |
| Flexural Stress, (23 °C, 2.0 mm/min, 2.6%)                          | 430           | MPa                | ISO 178     |
| <b>Impact</b>                                                       |               |                    |             |
| Charpy Impact Strength - Notched                                    |               |                    |             |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 15            | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned                    | 17            | kJ/m <sup>2</sup>  | ISO 179     |
| (-40 °C, Type 1, Edgewise, Notch A)                                 | 14            | kJ/m <sup>2</sup>  | ISO 179     |
| Charpy Impact Strength - Unnotched                                  |               |                    |             |
| (23 °C, Type 1, Edgewise)                                           | No Break      |                    | ISO 179     |
| (23 °C, Type 1, Edgewise) - Conditioned                             | No Break      |                    | ISO 179     |
| (-40 °C, Type 1, Edgewise)                                          | No Break      |                    | ISO 179     |
| <b>Thermal</b>                                                      |               |                    |             |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 200           | °C                 | ISO 75-2/A  |
| <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     |

#### Flammable

|                                |      |        |                |
|--------------------------------|------|--------|----------------|
| Burning Rate                   |      |        |                |
| (2.00 mm)                      | <100 | mm/min | FMVSS 302      |
| (2.00 mm)                      | <100 | 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 |
| Glow Wire Ignition Temperature |      |        |                |
| (1.5 mm)                       | 700  | °C     | IEC 60695-2-13 |
| (3.0 mm)                       | 700  | °C     | IEC 60695-2-13 |

#### Additional Information

|                           |     |   |        |
|---------------------------|-----|---|--------|
| Water Absorption 23C/50RH | 0.8 | % | ISO 62 |
|---------------------------|-----|---|--------|

#### UL Information

|                             |    |  |                      |
|-----------------------------|----|--|----------------------|
| Flammability Classification |    |  |                      |
| (1.5 mm)                    | HB |  | IEC 60695-11-10, -20 |
| (3.0 mm)                    | HB |  | IEC 60695-11-10, -20 |

| 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 | 240 to 280    | °C    |
| Mold Temperature       | 50 to 90      | °C    |