

## Technical Data Sheet

### Schulamid 612 FS5104 BLK968001



Polyamide 612

#### Product Description

Impact modified Polyamide 612 with electrical neutral heat stabilization system for extrusion applications. Heat stabilization system with very low halogen content (<30 ppm).

**Processing Method** Extrusion

**Attribute** Fuel Resistant; Good Chemical Resistance; Good Corrosion Resistance; Good Dimensional Stability; Good Heat Aging Resistance; High Impact Resistance; Low Temperature Toughness; Low to No Water Absorption; Oil Resistant

| Typical Properties                               | Nominal Value | Units                   | Test Method |
|--------------------------------------------------|---------------|-------------------------|-------------|
| <b>Physical</b>                                  |               |                         |             |
| Melt Volume Flow Rate, (275 °C/10.0 kg)          | 12            | cm <sup>3</sup> /10 min | ISO 1133    |
| Density, (Method A)                              | 1.01          | g/cm <sup>3</sup>       | ISO 1183    |
| <b>Mechanical</b>                                |               |                         |             |
| Nominal Tensile Strain at Break                  |               |                         |             |
| (50 mm/min, Type 1A) - Conditioned               | >270          | %                       | ISO 527-2   |
| (50 mm/min, Type 1A)                             | >200          | %                       | ISO 527-2   |
| Flexural Modulus                                 | 980           | MPa                     | ISO 178     |
| Tensile Stress at Break                          |               |                         |             |
| (Type 1A, 50 mm/min)                             | 37.0          | MPa                     | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 38.0          | MPa                     | ISO 527-2   |
| Tensile Modulus                                  |               |                         |             |
| (1 mm/min, Type 1A)                              | 1100          | MPa                     | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 460           | MPa                     | ISO 527-1   |
| <b>Impact</b>                                    |               |                         |             |
| Charpy Impact Strength - Notched                 |               |                         |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 98            | kJ/m <sup>2</sup>       | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 110           | kJ/m <sup>2</sup>       | ISO 179     |
| (-40 °C, Type 1, Edgewise, Notch A)              | 61            | 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>Hardness</b>                                  |               |                         |             |
| Ball Indentation Hardness, (H 132/30)            | 59.0          | MPa                     | ISO 2039-1  |
| <b>Thermal</b>                                   |               |                         |             |

|                                                                     |                      |              |                      |
|---------------------------------------------------------------------|----------------------|--------------|----------------------|
| Vicat Softening Temperature                                         |                      |              |                      |
| (B (50N), 50 °C/h)                                                  | 87.0                 | °C           | ISO 306              |
| (A (10N), 50 °C/h)                                                  | 200                  | °C           | ISO 306              |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 70.0                 | °C           | ISO 75-2/B           |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 39.0                 | °C           | ISO 75-2/A           |
| <b>Flammable</b>                                                    |                      |              |                      |
| Burning Rate                                                        |                      |              |                      |
| (2.00 mm)                                                           | <100                 | mm/min       | ISO 3795             |
| (2.00 mm)                                                           | <100                 | mm/min       | FMVSS 302            |
| Glow Wire Flammability Index                                        |                      |              |                      |
| (1.5 mm)                                                            | 675                  | °C           | IEC 60695-2-12       |
| (3.0 mm)                                                            | 675                  | °C           | IEC 60695-2-12       |
| Glow Wire Ignition Temperature                                      |                      |              |                      |
| (1.5 mm)                                                            | 650                  | °C           | IEC 60695-2-13       |
| (3.0 mm)                                                            | 650                  | °C           | IEC 60695-2-13       |
| <b>UL Information</b>                                               |                      |              |                      |
| Flammability Classification                                         |                      |              |                      |
| (1.5 mm)                                                            | HB                   |              | IEC 60695-11-10, -20 |
| (3.0 mm)                                                            | HB                   |              | IEC 60695-11-10, -20 |
| <b>Extrusion Parameters</b>                                         |                      |              |                      |
|                                                                     | <b>Nominal Value</b> | <b>Units</b> |                      |
| Drying Time                                                         | 3.0 to 4.0           | hr           |                      |
| Melt Temperature                                                    | 230 to 270           | °C           |                      |
| Suggested Max Moisture                                              | 0.1                  | %            |                      |
| Drying Temperature                                                  | 80                   | °C           |                      |