

## Technical Data Sheet

### Schuladur A1 GF30 HF FR 1 BLK968093



Polybutylene Terephthalate + PET

#### Product Description

High flow flame retardant halogenated PBT/PET compound reinforced with 30% glass fiber; without PBDE

|                             |                                                     |
|-----------------------------|-----------------------------------------------------|
| <b>Processing Method</b>    | Injection Molding                                   |
| <b>Attribute</b>            | Filled; Good Surface Finish; Halogenated; High Flow |
| <b>Additive</b>             | Flame Retardant                                     |
| <b>Filler/Reinforcement</b> | Glass Fiber, 30%                                    |

| Typical Properties                                                  | Nominal Value | Units                   | Test Method    |
|---------------------------------------------------------------------|---------------|-------------------------|----------------|
| <b>Physical</b>                                                     |               |                         |                |
| Melt Volume Flow Rate, (260 °C/5.0 kg)                              | 54            | cm <sup>3</sup> /10 min | ISO 1133       |
| Density, (Method A)                                                 | 1.68          | g/cm <sup>3</sup>       | ISO 1183       |
| <b>Mechanical</b>                                                   |               |                         |                |
| Tensile Strain at Break, (Type 1A, 5 mm/min)                        | 2.0           | %                       | ISO 527-2      |
| Tensile Stress at Break, (Type 1A, 5 mm/min)                        | 148           | MPa                     | ISO 527-2      |
| Tensile Modulus, (1 mm/min, Type 1A)                                | 12000         | MPa                     | ISO 527-1      |
| <b>Impact</b>                                                       |               |                         |                |
| Charpy Impact Strength - Notched                                    |               |                         |                |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 7.0           | kJ/m <sup>2</sup>       | ISO 179        |
| (-30 °C, Type 1, Edgewise, Notch A)                                 | 7.0           | kJ/m <sup>2</sup>       | ISO 179        |
| Charpy Impact Strength - Unnotched                                  |               |                         |                |
| (23 °C, Type 1, Edgewise)                                           | 46            | kJ/m <sup>2</sup>       | ISO 179        |
| (-30 °C, Type 1, Edgewise)                                          | 40            | kJ/m <sup>2</sup>       | ISO 179        |
| <b>Hardness</b>                                                     |               |                         |                |
| Ball Pressure Test, (200 °C)                                        | Pass          |                         | IEC 60695-10-2 |
| <b>Thermal</b>                                                      |               |                         |                |
| Vicat Softening Temperature                                         |               |                         |                |
| (B (50N), 50 °C/h)                                                  | 190           | °C                      | ISO 306        |
| (A (10N), 50 °C/h)                                                  | 218           | °C                      | ISO 306        |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 219           | °C                      | ISO 75-2/B     |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 198           | °C                      | ISO 75-2/A     |
| <b>Electrical</b>                                                   |               |                         |                |
| Volume Resistivity                                                  | >1.0E+13      | ohm*m                   | IEC 62631-3-1  |
| Comparative Tracking Index (CTI)                                    | 225           | V                       | IEC 60112      |
| Surface Resistivity                                                 | >1.0E+15      | ohm                     | IEC 60093      |

|                                |     |        |                |
|--------------------------------|-----|--------|----------------|
| <b>Flammable</b>               |     |        |                |
| Burning Rate                   |     |        |                |
| (2.00 mm, Self-Extinguishing)  | 0.0 | mm/min | FMVSS 302      |
| (2.00 mm, Self-Extinguishing)  | 0.0 | mm/min | ISO 3795       |
| Glow Wire Flammability Index   |     |        |                |
| (0.75 mm)                      | 960 | °C     | IEC 60695-2-12 |
| (1.5 mm)                       | 960 | °C     | IEC 60695-2-12 |
| (3.0 mm)                       | 960 | °C     | IEC 60695-2-12 |
| Glow Wire Ignition Temperature |     |        |                |
| (0.75 mm)                      | 675 | °C     | IEC 60695-2-13 |
| (1.5 mm)                       | 675 | °C     | IEC 60695-2-13 |
| (3.0 mm)                       | 675 | °C     | IEC 60695-2-13 |
| Oxygen Index                   | 34  | %      | ISO 4589-2     |

|                             |     |  |                      |
|-----------------------------|-----|--|----------------------|
| <b>UL Information</b>       |     |  |                      |
| Flame Rating                |     |  |                      |
| (1.5 mm)                    | V-0 |  | UL 94                |
| (3.0 mm)                    | 5VA |  | UL 94                |
| (3.0 mm)                    | V-0 |  | UL 94                |
| (0.75 mm)                   | V-0 |  | UL 94                |
| Flammability Classification |     |  |                      |
| (0.75 mm)                   | V-0 |  | IEC 60695-11-10, -20 |
| (1.5 mm)                    | V-0 |  | IEC 60695-11-10, -20 |
| (3.0 mm)                    | 5VA |  | IEC 60695-11-10, -20 |
| (3.0 mm)                    | V-0 |  | IEC 60695-11-10, -20 |

| <b>Injection Parameters</b> | <b>Nominal Value</b> | <b>Units</b> |
|-----------------------------|----------------------|--------------|
| Drying Time                 | 2.0 to 4.0           | hr           |
| Drying Temperature          | 120                  | °C           |
| Suggested Max Moisture      | 0.02                 | %            |
| Screw Speed                 | <250                 | mm/sec       |
| Processing (Melt) Temp      | 240 to 270           | °C           |
| Injection Rate              | Slow-Moderate        |              |
| Back Pressure               | 2.00 to 8.00         | MPa          |
| Mold Temperature            | 80 to 110            | °C           |