

## Technical Data Sheet

### Schulatec PPS E FS NAT

Polyphenylene Sulfide

#### Product Description

PPS unreinforced, impact-modified, with high melt viscosity for extrusion application

**Processing Method** Extrusion

| Typical Properties                                            | Nominal Value | Units                   | Test Method   |
|---------------------------------------------------------------|---------------|-------------------------|---------------|
| <b>Physical</b>                                               |               |                         |               |
| Melt Volume Flow Rate                                         | 10            | cm <sup>3</sup> /10 min | ISO 1133      |
| Density, (Method A)                                           | 1.17          | g/cm <sup>3</sup>       | ISO 1183      |
| <b>Mechanical</b>                                             |               |                         |               |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                 | 35.0          | MPa                     | ISO 527-2     |
| Flexural Modulus                                              | 1300          | MPa                     | ISO 178       |
| Tensile Strain at Yield, (Type 1A, 50 mm/min)                 | 85            | %                       | ISO 527-2     |
| Tensile Modulus, (1 mm/min, Type 1A)                          | 1100          | MPa                     | ISO 527-1     |
| Flexural Stress, (3.5%)                                       | 35.0          | MPa                     | ISO 178       |
| <b>Impact</b>                                                 |               |                         |               |
| Charpy Impact Strength - Notched, (Type 1, Edgewise, Notch A) | 60            | kJ/m <sup>2</sup>       | ISO 179       |
| Charpy Impact Strength - Unnotched                            | No Break      |                         | ISO 179-1/1eU |
| <b>Hardness</b>                                               |               |                         |               |
| Shore Hardness                                                |               |                         |               |
| (Shore A, 10 sec)                                             | 95            |                         | ISO 868       |
| (Shore D, 10 sec)                                             | 70            |                         | ISO 868       |
| <b>Thermal</b>                                                |               |                         |               |
| Vicat Softening Temperature                                   |               |                         |               |
| (B (50N), 50 °C/h)                                            | 130           | °C                      | ISO 306       |
| (A (10N), 50 °C/h)                                            | 255           | °C                      | ISO 306       |
| Deflection Temperature Under Load Annealed (1.80 MPa)         | 95            | °C                      | ISO 75-2/A    |
| Deflection Temperature Under Load Unannealed (0.45 MPa)       | 110           | °C                      | ISO 75-2/B    |
| DSC Melting Point                                             | 280           | °C                      | DSC           |
| <b>Electrical</b>                                             |               |                         |               |
| Comparative Tracking Index (CTI), (Solution A)                | 175           | V                       | IEC 60112     |
| <b>Flammable</b>                                              |               |                         |               |
| Burning Rate                                                  |               |                         |               |
| (2.00 mm)                                                     | 38            | mm/min                  | ISO 3795      |
| (2.00 mm)                                                     | 38            | mm/min                  | FMVSS 302     |

|                                |     |    |                |
|--------------------------------|-----|----|----------------|
| Glow Wire Flammability Index   |     |    |                |
| (0.75 mm)                      | 700 | °C | IEC 60695-2-12 |
| (1.5 mm)                       | 700 | °C | IEC 60695-2-12 |
| (3.0 mm)                       | 700 | °C | IEC 60695-2-12 |
| Glow Wire Ignition Temperature |     |    |                |
| (0.75 mm)                      | 725 | °C | IEC 60695-2-13 |
| (1.5 mm)                       | 725 | °C | IEC 60695-2-13 |
| (3.0 mm)                       | 725 | °C | IEC 60695-2-13 |

#### UL Information

|              |    |  |       |
|--------------|----|--|-------|
| Flame Rating |    |  |       |
| (1.5 mm)     | HB |  | UL 94 |
| (3.0 mm)     | HB |  | UL 94 |
| (0.75 mm)    | HB |  | UL 94 |

| Injection Parameters                | Nominal Value | Units |
|-------------------------------------|---------------|-------|
| Drying Time                         | 3.0 to 4.0    | hr    |
| Drying Temperature, (Dry Air Dryer) | 135 to 140    | °C    |
| Processing (Melt) Temp              | 285 to 295    | °C    |