

## Technical Data Sheet

### Schulaketon GF30 4DE SF ORE962591



Polyketone, Aliphatic

#### Product Description

30% glass fiber reinforced aliphatic Polyketone, flame-retardant, halogen free. Available in orange colour.

|                      |                         |
|----------------------|-------------------------|
| Processing Method    | Injection Molding       |
| Attribute            | Halogen Free; PFAS free |
| Additive             | Flame Retardant         |
| Filler/Reinforcement | Glass Fiber, 30%        |
| Resin ID             | PK GF30 FR(40)          |

| Typical Properties                                                   | Nominal Value | Units                   | Test Method |
|----------------------------------------------------------------------|---------------|-------------------------|-------------|
| <b>Physical</b>                                                      |               |                         |             |
| Melt Volume Flow Rate, (240 °C/5.0 kg)                               | 20            | cm <sup>3</sup> /10 min | ISO 1133    |
| Density, (Method A)                                                  | 1.47          | g/cm <sup>3</sup>       | ISO 1183    |
| <b>Mechanical</b>                                                    |               |                         |             |
| Tensile Strain at Break, (Type 1A, 5 mm/min)                         | 4.0           | %                       | ISO 527-2   |
| Tensile Stress at Break, (Type 1A, 5 mm/min)                         | 125           | MPa                     | ISO 527-2   |
| Tensile Modulus, (1 mm/min, Type 1A)                                 | 8000          | MPa                     | ISO 527-1   |
| <b>Impact</b>                                                        |               |                         |             |
| Charpy Impact Strength - Notched, (23 °C, Type 1, Edgewise, Notch A) | 13            | kJ/m <sup>2</sup>       | ISO 179     |
| Charpy Impact Strength - Unnotched, (23 °C, Type 1, Edgewise)        | 80            | kJ/m <sup>2</sup>       | ISO 179     |
| <b>Thermal</b>                                                       |               |                         |             |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)  | 209           | °C                      | ISO 75-2/A  |
| RTI Elec                                                             |               |                         |             |
| (1.6 mm)                                                             | 50.0          | °C                      | UL 746B     |
| (3.0 mm)                                                             | 50.0          | °C                      | UL 746B     |
| (0.8 mm)                                                             | 50.0          | °C                      | UL 746B     |
| (0.40 mm)                                                            | 50.0          | °C                      | UL 746B     |
| (0.60 mm)                                                            | 50.0          | °C                      | UL 746B     |
| RTI Imp                                                              |               |                         |             |
| (1.6 mm)                                                             | 50.0          | °C                      | UL 746B     |
| (3.0 mm)                                                             | 50.0          | °C                      | UL 746B     |
| (0.8 mm)                                                             | 50.0          | °C                      | UL 746B     |
| (0.40 mm)                                                            | 50.0          | °C                      | UL 746B     |
| (0.60 mm)                                                            | 50.0          | °C                      | UL 746B     |

|           |      |    |         |
|-----------|------|----|---------|
| RTI Str   |      |    |         |
| (1.6 mm)  | 50.0 | °C | UL 746B |
| (3.0 mm)  | 50.0 | °C | UL 746B |
| (0.8 mm)  | 50.0 | °C | UL 746B |
| (0.40 mm) | 50.0 | °C | UL 746B |
| (0.60 mm) | 50.0 | °C | UL 746B |

#### Electrical

|                                               |          |       |               |
|-----------------------------------------------|----------|-------|---------------|
| Volume Resistivity                            | >1.0E+13 | ohm*m | IEC 62631-3-1 |
| Dielectric Strength, (in Air, 1.00 mm, 23 °C) | 38       | kV/mm | IEC 60243-1   |
| Comparative Tracking Index (CTI)              | 600      | V     | IEC 60112     |
| Surface Resistivity                           | >1.0E+15 | ohm   | IEC 60093     |

#### Flammable

|                                |     |        |                |
|--------------------------------|-----|--------|----------------|
| 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   |     |        |                |
| (3.0 mm)                       | 960 | °C     | IEC 60695-2-12 |
| (0.8 mm)                       | 960 | °C     | IEC 60695-2-12 |
| (1.6 mm)                       | 960 | °C     | IEC 60695-2-12 |
| Glow Wire Ignition Temperature |     |        |                |
| (3.0 mm)                       | 825 | °C     | IEC 60695-2-13 |
| (1.6 mm)                       | 850 | °C     | IEC 60695-2-13 |
| (0.8 mm)                       | 825 | °C     | IEC 60695-2-13 |

#### UL Information

|                             |     |  |                      |
|-----------------------------|-----|--|----------------------|
| Flame Rating                |     |  |                      |
| (1.6 mm)                    | V-0 |  | UL 94                |
| (3.0 mm)                    | V-0 |  | UL 94                |
| (0.8 mm)                    | V-0 |  | UL 94                |
| Flammability Classification |     |  |                      |
| (0.8 mm)                    | V-0 |  | IEC 60695-11-10, -20 |
| (1.6 mm)                    | V-0 |  | IEC 60695-11-10, -20 |
| (3.0 mm)                    | V-0 |  | IEC 60695-11-10, -20 |

#### Injection Parameters

|                        | Value         | Units  |
|------------------------|---------------|--------|
| Drying Time            | 2.0 to 4.0    | hr     |
| Drying Temperature     | 80            | °C     |
| Suggested Max Moisture | 0.15          | %      |
| Screw Speed            | <250          | mm/sec |
| Processing (Melt) Temp | 220 to 230    | °C     |
| Injection Rate         | Slow-Moderate |        |
| Back Pressure          | 2.00 to 8.00  | MPa    |
| Mold Temperature       | 60 to 100     | °C     |