

## Technical Data Sheet

### *Schulaform AF9 NAT*

Acetal (POM) Copolymer

#### Product Description

Aramid fibre filled POM-Compound with improved abrasion resistance

|                      |                          |
|----------------------|--------------------------|
| Processing Method    | Injection Molding        |
| Attribute            | Good Abrasion Resistance |
| Filler/Reinforcement | Aramid Fiber             |

| Typical Properties                                                  | Nominal Value | Units                   | Test Method   |
|---------------------------------------------------------------------|---------------|-------------------------|---------------|
| <b>Physical</b>                                                     |               |                         |               |
| Melt Volume Flow Rate, (190 °C/2.16 kg)                             | 4.5           | cm <sup>3</sup> /10 min | ISO 1133      |
| Density, (Method A)                                                 | 1.41          | g/cm <sup>3</sup>       | ISO 1183      |
| <b>Mechanical</b>                                                   |               |                         |               |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                       | 55.0          | MPa                     | ISO 527-2     |
| Tensile Strain at Yield, (Type 1A, 50 mm/min)                       | 10            | %                       | ISO 527-2     |
| Tensile Elongation at Break                                         | 12            | %                       | ASTM D638     |
| Tensile Modulus, (1 mm/min, Type 1A)                                | 2900          | MPa                     | ISO 527-1     |
| <b>Impact</b>                                                       |               |                         |               |
| Charpy Impact Strength - Notched                                    |               |                         |               |
| (23 °C, Type 1, Notch A)                                            | 5.0           | kJ/m <sup>2</sup>       | ISO 179       |
| (-30 °C, Type 1, Notch A)                                           | 3.0           | kJ/m <sup>2</sup>       | ISO 179       |
| Charpy Impact Strength - Unnotched                                  |               |                         |               |
| (-30 °C, Type 1)                                                    | 40            | kJ/m <sup>2</sup>       | ISO 179       |
| (23 °C, Type 1)                                                     | 45            | kJ/m <sup>2</sup>       | ISO 179       |
| Notched Izod Impact, (3.20 mm, Method A)                            | 61            | J/m                     | ASTM D256     |
| <b>Hardness</b>                                                     |               |                         |               |
| Ball Indentation Hardness, (H 132/10)                               | 132           | MPa                     | ISO 2039-1    |
| <b>Thermal</b>                                                      |               |                         |               |
| Vicat Softening Temperature                                         |               |                         |               |
| (B (50N), 50 °C/h)                                                  | 147           | °C                      | ISO 306       |
| (A (10N), 50 °C/h)                                                  | 163           | °C                      | ISO 306       |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 156           | °C                      | ISO 75-2/B    |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 100           | °C                      | ISO 75-2/A    |
| <b>Electrical</b>                                                   |               |                         |               |
| Volume Resistivity                                                  | >1.0E+13      | ohm*m                   | IEC 62631-3-1 |
| Comparative Tracking Index (CTI)                                    | 600           | V                       | IEC 60112     |

|                                |               |        |                      |
|--------------------------------|---------------|--------|----------------------|
| Surface Resistivity            | >1.0E+15      | ohm    | IEC 60093            |
| Flammable                      |               |        |                      |
| Burning Rate                   |               |        |                      |
| (2.00 mm)                      | 40            | mm/min | ISO 3795             |
| (2.00 mm)                      | 40            | mm/min | FMVSS 302            |
| Glow Wire Flammability Index   |               |        |                      |
| (1.5 mm)                       | 625           | °C     | IEC 60695-2-12       |
| (3.0 mm)                       | 625           | °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       |
| 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                    | 2.0 to 4.0    | hr     |                      |
| Drying Temperature             | 100           | °C     |                      |
| Suggested Max Moisture         | 0.040 to 0.10 | %      |                      |
| Processing (Melt) Temp         | 190 to 220    | °C     |                      |
| Mold Temperature               | 60 to 120     | °C     |                      |