

Technical Data Sheet

# SCHULAMID® 6 MT 20 H FR 4

Polyamide 6  
Engineering Plastics

**Product Description**  
20% talc filled flame-retardant Polyamide 6, heat stabilized

| General                |                                      |
|------------------------|--------------------------------------|
| Filler / Reinforcement | • Talc\Mineral, 20% Filler by Weight |
| Features               | • Flame Retardant                    |
| Processing Method      | • Injection Molding                  |
| Resin ID (ISO 1043)    | • PA6 MD 20 FR(17)                   |

| Physical         | Dry  | Conditioned | Unit               | Test Method |
|------------------|------|-------------|--------------------|-------------|
| Density          | 1.52 | --          | g/cm <sup>3</sup>  | ISO 1183/A  |
| Viscosity Number | 145  | --          | cm <sup>3</sup> /g | ISO 307     |

| Mechanical             | Dry              | Conditioned      | Unit         | Test Method    |
|------------------------|------------------|------------------|--------------|----------------|
| Tensile Modulus        | 870000<br>(6000) | 312000<br>(2150) | psi<br>(MPa) | ISO 527-2/1A/1 |
| Tensile Stress (Break) | 8850<br>(61.0)   | 5080<br>(35.0)   | psi<br>(MPa) | ISO 527-2/1A/5 |
| Tensile Strain (Break) | 3.7              | 50               | %            | ISO 527-2/1A/5 |

| Impact                           | Dry   | Conditioned | Unit  | Test Method |
|----------------------------------|---|-------------|---|-------------|
| Charpy Notched Impact Strength   |   |             |   | ISO 179/1eA |
| -22°F (-30°C)                    | 1.2<br>(2.5)  | --          | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 1.4<br>(3.0)  | 6.7<br>(14) | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| Charpy Unnotched Impact Strength |   |             |   | ISO 179/1eU |
| -22°F (-30°C)                    | 18<br>(37)  | --          | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 19 ft·lb/in <sup>2</sup><br>(40 kJ/m <sup>2</sup> ) | No Break    | (kJ/m <sup>2</sup> )                          |             |

| Thermal                            | Dry          | Conditioned | Unit       | Test Method    |
|------------------------------------|--------------|-------------|------------|----------------|
| Heat Deflection Temperature        |              |             |            |                |
| 66 psi (0.45 MPa), Unannealed      | 363<br>(184) | --          | °F<br>(°C) | ISO 75-2/Bf    |
| 264 psi (1.8 MPa), Unannealed      | 225<br>(107) | --          | °F<br>(°C) | ISO 75-2/Af    |
| Ball Pressure Test (392°F (200°C)) | Pass         | --          |            | IEC 60695-10-2 |

| Electrical                 | Dry       | Conditioned | Unit   | Test Method   |
|----------------------------|-----------|-------------|--------|---------------|
| Surface Resistivity        | > 1.0E+15 | --          | ohms   | IEC 60093     |
| Volume Resistivity         | > 1.0E+13 | > 1.0E+10   | ohms·m | IEC 62631-3-1 |
| Comparative Tracking Index | 250       | --          | V      | IEC 60112     |

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| Flammability                             | Dry           | Conditioned | Unit               | Test Method                      |
|--|---------------|-------------|--------------------|----------------------------------|
| Burning Rate                             |               |             |                    | ISO 3795                         |
| 0.0295 in (0.750 mm), Self-Extinguishing | 0.0           | --          | in/min<br>(mm/min) |                                  |
| 0.0591 in (1.50 mm), Self-Extinguishing  | 0.0           | --          | in/min<br>(mm/min) |                                  |
| Flame Rating (0.06 in (1.5 mm))          | V-0           | --          |                    | UL 94<br>IEC 60695-11-10,<br>-20 |
| Glow Wire Flammability Index             |               |             |                    | IEC 60695-2-12                   |
| 0.06 in (1.5 mm)                         | 1760<br>(960) | --          | °F<br>(°C)         |                                  |
| Glow Wire Ignition Temperature           |               |             |                    | IEC 60695-2-13                   |
| 0.06 in (1.5 mm)                         | 1470<br>(800) | --          | °F<br>(°C)         |                                  |

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| Injection              | Dry (English)   | Dry (SI)         |
|------------------------|-----------------|------------------|
| Drying Temperature     | 176 °F          | 80 °C            |
| Drying Time            | 3.0 to 4.0 hr   | 3.0 to 4.0 hr    |
| Suggested Max Regrind  | 25 %            | 25 %             |
| Processing (Melt) Temp | 464 to 518 °F   | 240 to 270 °C    |
| Mold Temperature       | 122 to 176 °F   | 50 to 80 °C      |
| Injection Rate         | Slow-Moderate   | Slow-Moderate    |
| Back Pressure          | 290 to 1160 psi | 2.00 to 8.00 MPa |
| Screw Speed            | 591 in/min      | 15 m/min         |

**Injection Notes**

Mould surface contacting melt should be of non-corrosive steel (content of chrome > 12%)

**Notes**

These are typical property values not to be construed as specification limits.