

Technical Data Sheet

# SCHULAMID® 6 HV 11

Polyamide 6  
Engineering Plastics

## Product Description

High viscosity Polyamide 6 for extrusion and injection molding

## General

|                     |                  |                     |                 |
|---------------------|------------------|---------------------|-----------------|
| Features            | • Good Toughness | • High Viscosity    | • Oil Resistant |
| Processing Method   | • Extrusion      | • Injection Molding |                 |
| Resin ID (ISO 1043) | • PA6            |                     |                 |

| Physical                                     | Dry              | Conditioned      | Unit                                          | Test Method     |
|----------------------------------------------|------------------|------------------|-----------------------------------------------|-----------------|
| Density                                      | 1.13             | --               | g/cm <sup>3</sup>                             | ISO 1183/A      |
| Water Absorption                             |                  |                  |                                               | ISO 62          |
| Equilibrium, 73°F (23°C), 50% RH             | 2.5              | --               | %                                             |                 |
| Viscosity Number                             | 245              | --               | cm <sup>3</sup> /g                            | ISO 307         |
| Mechanical                                   | Dry              | Conditioned      | Unit                                          | Test Method     |
| Tensile Modulus                              | 363000<br>(2500) | 174000<br>(1200) | psi<br>(MPa)                                  | ISO 527-2/1A/1  |
| Tensile Stress (Yield)                       | 10900<br>(75.0)  | 7250<br>(50.0)   | psi<br>(MPa)                                  | ISO 527-2/1A/50 |
| Tensile Strain (Yield)                       | 4.0              | 25               | %                                             | ISO 527-2/1A/50 |
| Impact                                       | Dry              | Conditioned      | Unit                                          | Test Method     |
| Charpy Notched Impact Strength (73°F (23°C)) | 6.7<br>(14)      | 29<br>(60)       | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) | ISO 179/1eA     |
| Charpy Unnotched Impact Strength             |                  |                  |                                               | ISO 179/1eU     |
| 73°F (23°C)                                  | No Break         | No Break         |                                               |                 |
| Hardness                                     | Dry              | Conditioned      | Unit                                          | Test Method     |
| Ball Indentation Hardness (H 358/30)         | 18900<br>(130)   | 10900<br>(75.0)  | psi<br>(MPa)                                  | ISO 2039-1      |
| Thermal                                      | Dry              | Conditioned      | Unit                                          | Test Method     |
| Heat Deflection Temperature                  |                  |                  |                                               |                 |
| 66 psi (0.45 MPa), Unannealed                | 347<br>(175)     | --               | °F<br>(°C)                                    | ISO 75-2/Bf     |
| 264 psi (1.8 MPa), Unannealed                | 149<br>(65.0)    | --               | °F<br>(°C)                                    | ISO 75-2/Af     |
| Vicat Softening Temperature                  |                  |                  |                                               |                 |
| --                                           | 414<br>(212)     | --               | °F<br>(°C)                                    | ISO 306/A50     |
| --                                           | 385<br>(196)     | --               | °F<br>(°C)                                    | ISO 306/B50     |
| Electrical                                   | Dry              | Conditioned      | Unit                                          | Test Method     |
| Surface Resistivity                          | > 1.0E+15        | > 1.0E+12        | ohms                                          | IEC 60093       |
| Volume Resistivity                           | > 1.0E+13        | > 1.0E+10        | ohms·m                                        | IEC 62631-3-1   |
| Comparative Tracking Index                   | 600              | --               | V                                             | IEC 60112       |

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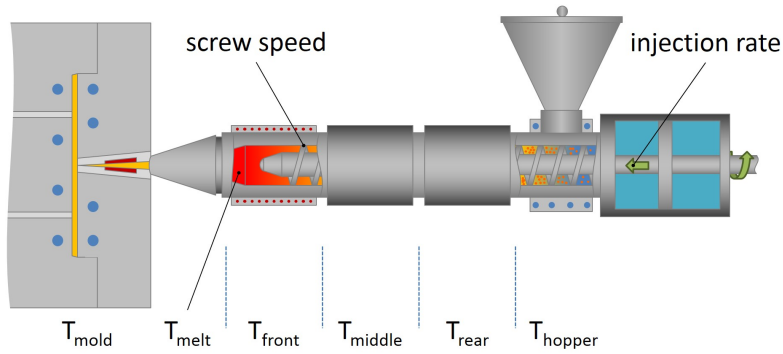
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| Flammability                | Dry         | Conditioned | Unit               | Test Method             |
|-----------------------------|-------------|-------------|--------------------|-------------------------|
| Burning Rate                |             |             |                    |                         |
| 0.0787 in (2.00 mm)         | 3.1<br>(80) | --          | in/min<br>(mm/min) | ISO 3795                |
| 0.0787 in (2.00 mm)         | 3.1<br>(80) | --          | in/min<br>(mm/min) | FMVSS 302               |
| Flammability Classification |             |             |                    | IEC 60695-11-10,<br>-20 |
| 0.030 in (0.75 mm)          | HB          | --          |                    |                         |
| 0.06 in (1.5 mm)            | HB          | --          |                    |                         |
| 0.12 in (3.0 mm)            | HB          | --          |                    |                         |

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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 Moisture | 0.04 to 0.10 % | 0.04 to 0.10 % |
| Suggested Max Regrind  | 20 %           | 20 %           |
| Processing (Melt) Temp | 482 to 518 °F  | 250 to 270 °C  |
| Mold Temperature       | 140 to 194 °F  | 60 to 90 °C    |

## Notes

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