

Technical Data Sheet

**Schulamid 612 NV FC EXP NATURAL**



Polyamide 612

**Product Description**

Polyamide 612, low viscosity grade thinn for injection molding parts. Material with flame rating V-2. FDA approved for food contact.

**Processing Method**            Injection Molding

**Resin ID**                        PA612

| Typical Properties                               | Nominal Value | Units                   | Test Method |
|--|---------------|-------------------------|-------------|
| <b>Physical</b>                                  |               |                         |             |
| Melt Volume Flow Rate, (230 °C/21.6 kg)          | 80            | cm <sup>3</sup> /10 min | ISO 1133    |
| Density, (Method A)                              | 1.05          | g/cm <sup>3</sup>       | ISO 1183    |
| Viscosity Number                                 | 105           | cm <sup>3</sup> /g      | ISO 307     |
| <b>Mechanical</b>                                |               |                         |             |
| Tensile Stress at Yield                          | 65            | MPa                     | ISO 527-2   |
| - Conditioned                                    | 53            | MPa                     | ISO 527-2   |
| Nominal Tensile Strain at Break                  |               |                         |             |
| (50 mm/min, Type 1A) - Conditioned               | 120           | %                       | ISO 527-2   |
| (50 mm/min, Type 1A)                             | 32            | %                       | ISO 527-2   |
| Tensile Strain at Yield                          |               |                         |             |
| (Type 1A, 50 mm/min)                             | 11            | %                       | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 16            | %                       | ISO 527-2   |
| Tensile Stress at Break                          |               |                         |             |
| - Conditioned                                    | 40            | MPa                     | ISO 527-2   |
|  | 37            | MPa                     | ISO 527-2   |
| Tensile Modulus                                  |               |                         |             |
| (1 mm/min, Type 1A)                              | 2700          | MPa                     | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 1400          | MPa                     | ISO 527-1   |
| <b>Impact</b>                                    |               |                         |             |
| Charpy Impact Strength - Notched                 |               |                         |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 3.5           | kJ/m <sup>2</sup>       | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 3.5           | kJ/m <sup>2</sup>       | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 4.5           | kJ/m <sup>2</sup>       | ISO 179     |
| Charpy Impact Strength - Unnotched               |               |                         |             |
| (23 °C, Type 1, Edgewise)                        | No Break      |                         | ISO 179     |
| (-30 °C, Type 1, Edgewise)                       | No Break      |                         | ISO 179     |
| (23 °C, Type 1, Edgewise) - Conditioned          | No Break      |                         | ISO 179     |
| <b>Thermal</b>                                   |               |                         |             |

|   |      |        |            |
|---|------|--------|------------|
| <b>Vicat Softening Temperature</b>                                  |      |        |            |
| (B (50N), 50 °C/h)  | 184  | °C     | ISO 306    |
| (A (10N), 50 °C/h)  | 208  | °C     | ISO 306    |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 57.0 | °C     | ISO 75-2/A |
| <b>Flammable</b>  |      |        |            |
| <b>Burning Rate</b>   |      |        |            |
| (2.00 mm)   | <100 | mm/min | FMVSS 302  |
| (2.00 mm)   | <100 | mm/min | ISO 3795   |
| <b>Additional Information</b>                                       |      |        |            |
| Water Absorption, - Conditioned                                     | 1.2  | %      |            |
| <b>UL Information</b>   |      |        |            |
| Flame Rating, (8.0 mm)  | V-2  |        | UL 94      |

| <b>Injection Parameters</b> | <b>Nominal Value</b> | <b>Units</b> |
|-----------------------------|----------------------|--------------|
| Drying Time                 | 3.0 to 4.0           | hr           |
| Drying Temperature          | 80                   | °C           |
| Suggested Max Moisture      | 0.040 to 0.10        | %            |
| Processing (Melt) Temp      | 230 to 270           | °C           |
| Mold Temperature            | 50 to 90             | °C           |