

## Technical Data Sheet

**Schulamid 612 FS4004 K2348 BLK**

Polyamide 612

**Product Description**

High impact modified Polyamide 612 with highly effective long term heat stabilization system. Grade designed for extrusion applications. Matte surface quality. High chemical resistance. Applications: Fluid systems. Specially used in automotive fluid systems.

**Processing Method** Extrusion

**Attribute** Good Chemical Resistance; Good Heat Aging Resistance; Impact Modified; Low Gloss; Salt Water/Spray Resistant

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Density, (Method A)	1.01	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical</b>			
Tensile Stress at Yield			
(Type 1A, 50 mm/min)	35.0	MPa	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	27.0	MPa	ISO 527-2
Nominal Tensile Strain at Break			
(50 mm/min, Type 1A) - Conditioned	>250	%	ISO 527-2
(50 mm/min, Type 1A)	>250	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	1000	MPa	ISO 178
Tensile Strain at Yield			
(Type 1A, 50 mm/min)	29	%	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	36	%	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	1100	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	590	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	35.0	MPa	ISO 178
(2.0 mm/min, 7.0%)	44.0	MPa	ISO 178
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	110	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	70	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	120	kJ/m <sup>2</sup>	ISO 179
(-40 °C, Type 1, Edgewise, Notch A)	95	kJ/m <sup>2</sup>	ISO 179

<b>Charpy Impact Strength - Unnotched</b>			
(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
(-40 °C, Type 1, Edgewise)	No Break		ISO 179
<b>Hardness</b>			
Ball Indentation Hardness, (H 358/30)	64.0 MPa		ISO 2039-1
<b>Thermal</b>			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	110 °C		ISO 306
(A (10N), 50 °C/h)	200 °C		ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	100 °C		ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	45.0 °C		ISO 75-2/A
<b>Electrical</b>			
Volume Resistivity	>1.0E+13 ohm*m		IEC 62631-3-1
- Conditioned	>1.0E+10 ohm*m		IEC 62631-3-1
Surface Resistivity	>1.0E+15 ohm		IEC 60093
- Conditioned	>1.0E+12 ohm		IEC 60093
<b>Flammable</b>			
Burning Rate			
(2.00 mm)	30 mm/min		FMVSS 302
(2.00 mm)	30 mm/min		ISO 3795
Glow Wire Flammability Index			
(1.5 mm)	725 °C		IEC 60695-2-12
(3.0 mm)	725 °C		IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm)	700 °C		IEC 60695-2-13
(3.0 mm)	700 °C		IEC 60695-2-13
<b>UL Information</b>			
Flammability Classification			
(1.5 mm)	HB		IEC 60695-11-10, -20
(3.0 mm)	HB		IEC 60695-11-10, -20
<b>Extrusion Parameters</b>			
	<b>Nominal Value</b>	<b>Units</b>	
Drying Time	3.0 to 4.0	hr	
Melt Temperature	230 to 270	°C	
Suggested Max Moisture	0.1	%	
Drying Temperature	80	°C	