Technical Data Sheet

Schulamid 612 FS4004 K2348 NAT

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
Physical			
Density, (Method A)	1.01	g/cm³	ISO 1183
Mechanical			
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
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	110	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	70	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	120	kJ/m²	ISO 179
(-40 °C, Type 1, Edgewise, Notch A)	95	kJ/m²	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
(-40 °C, Type 1, Edgewise)	No Break		ISO 179
Hardness			
Ball Indentation Hardness, (H 358/30)	64.0	MPa	ISO 2039-1
Thermal			
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
Electrical			
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
Flammable			
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
UL Information			
Flammability Classification			
(1.5 mm)	HB		IEC 60695-11-10, -20
(3.0 mm)	HB		IEC 60695-11-10, -20

Extrusion Parameters	Nominal Value	Units
Drying Time	3.0 to 4.0	hr
Melt Temperature	230 to 270	°C
Suggested Max Moisture	0.1	%
Drying Temperature	80	°C