Technical Data Sheet

Schulamid 612 FS 5003 MC K23 BLK968001

Polyamide 612

Product Description

Impact modified Polyamide 612 with heat stabilization. Specially designed for outside coating of metal tubes. Improved flow properties. High chemical resistance. High gloss surface.

Processing Method	Extrusion; Injection Molding
Attribute	Good Chemical Resistance; Good Heat Aging Resistance; Impact Modified; Light Stabilized; Salt Water/Spray Resistant
Resin ID	PA612

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (245 °C/5.0 kg)	10	cm³/10 min	ISO 1133
Density, (Method A)	1.04	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield			
(Type 1A, 50 mm/min)	50.0	MPa	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	35.0	MPa	ISO 527-2
Nominal Tensile Strain at Break			
(50 mm/min, Type 1A) - Conditioned	300	%	ISO 527-2
(50 mm/min, Type 1A)	35	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	1400	MPa	ISO 178
Tensile Strain at Yield			
(Type 1A, 50 mm/min)	5.5	%	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	22	%	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	1900	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	830	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	48.0	MPa	ISO 178
(2.0 mm/min, 7.1%)	61.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	75	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	25	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	120	kJ/m²	ISO 179
(-40 °C, Type 1, Edgewise, Notch A)	12	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)	112	MPa	ISO 2039-1
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	146	°C	ISO 306
(A (10N), 50 °C/h)	205	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	108	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	90.0	°C	ISO 75-2/A
Flammable			
Burning Rate			
(2.00 mm)	20	mm/min	ISO 3795
(2.00 mm)	20	mm/min	FMVSS 302
Glow Wire Flammability Index			
(1.5 mm)	700	°C	IEC 60695-2-12
(3.0 mm)	700	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm)	725	°C	IEC 60695-2-13
(3.0 mm)	725	°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	250 to 270	°C
Suggested Max Moisture	0.1	%
Drying Temperature	80	°C