Technical Data Sheet

Schulaketon E NOM NAT

Polyketone, Aliphatic

Product Description

High viscosity aliphatic Polyketon for injection molding and extrusion applications.

Processing Method	Extrusion; Injection Molding
Resin ID	PK

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (240 °C/5.0 kg)	8.0	cm³/10 min	ISO 1133
Density, (Method A)	1.22	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield			
(23 °C)	45.0	MPa	ISO 527-2
(Type 1A, 80 °C, 50 mm/min)	35.0	MPa	ISO 527-2
Flexural Modulus, (2.0 mm/min)	1300	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	20	%	ISO 527-2
Tensile Modulus			
(23 °C)	1200	MPa	ISO 527-1
(80 °C, 1 mm/min, Type 1A)	600	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	45.0	MPa	ISO 178
(2.0 mm/min, 9.0%)	45.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	15	kJ/m²	ISO 179
(-40 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-40 °C)	No Break		ISO 179
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	150	°C	ISO 306
(A (10N), 50 °C/h)	186	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	140	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	70.0	°C	ISO 75-2/A
Melting Temperature	198	°C	

Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI), (Solution A)	600	V	IEC 60112
Surface Resistivity	>1.0E+15	ohm	IEC 60093
Flammable			
Burning Rate			
(2.00 mm)	<100	mm/min	FMVSS 302
(2.00 mm)	<100	mm/min	ISO 3795
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			
Flame Rating			
(1.6 mm)	HB		UL 94
(3.2 mm)	HB		UL 94
Flammability Classification			
(1.6 mm)	HB		IEC 60695-11-10, -20
(3.2 mm)	HB		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	3.0 to 4.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	225 to 240	°C
Mold Temperature	60 to 120	°C