

Technical Data Sheet

Schulaketon MV 4DE BLK968069



Polyketone, Aliphatic

Product Description

Medium viscosity aliphatic Polyketone, flame-retardant, halogen free

Processing Method	Injection Molding
Attribute	Halogen Free; PFAS free
Additive	Flame Retardant
Resin ID	PK FR(40)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (240 °C/2.16 kg)	30	cm ³ /10 min	ISO 1133
Density, (Method A)	1.24	g/cm ³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	50.0	MPa	ISO 527-2
Flexural Modulus, (2.0 mm/min)	1950	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	18	%	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	1700	MPa	ISO 527-1
Flexural Stress, (2.0 mm/min, 3.5%)	50.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	7.0	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	3.5	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched			
(-30 °C)	60	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise)	No Break		ISO 179
Hardness			
Ball Pressure Test, (130 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	187	°C	ISO 306
(A (10N), 50 °C/h)	213	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	184	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	83.0	°C	ISO 75-2/A
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1

Comparative Tracking Index (CTI)	600	V	UL 746A
Surface Resistivity	>1.0E+15	ohm	IEC 60093
Flammable			
Burning Rate			
(2.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(2.00 mm, Self-Extinguishing)	0.0	mm/min	FMVSS 302
Glow Wire Flammability Index			
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(0.75 mm)	775	°C	IEC 60695-2-13
(1.5 mm)	775	°C	IEC 60695-2-13
(3.0 mm)	775	°C	IEC 60695-2-13
Oxygen Index	33	%	ISO 4589-2
UL Information			
Flame Rating			
(1.6 mm)	V-0		UL 94
(3.2 mm)	V-0		UL 94
(0.8 mm)	V-0		UL 94
Flammability Classification			
(0.8 mm)	V-0		IEC 60695-11-10, -20
(1.6 mm)	V-0		IEC 60695-11-10, -20
(3.2 mm)	V-0		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.15	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	225 to 240	°C
Injection Rate	Slow-Moderate	
Back Pressure	2.00 to 8.00	MPa
Mold Temperature	60 to 100	°C