POKETONE M730F

Hyosung Chemical Corporation - *Polyketone, Aliphatic*

General Information

Product Description			
Food & drug extrusion grade			
General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Food Contact Acceptable		
Agency Ratings	• ACS • FDA FCN 1847 • ISO 10993	• KTW • NSF STD-51 • NSF STD-61	• USP Class VI • WRAS
RoHS Compliance	• RoHS Compliant		
Processing Method	• Extrusion		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.24		ASTM D792
Density	1.24	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (240°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.118 in)	0.022	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.118 in)	0.021	in/in	ASTM D955
Water Absorption (Saturation)	2.2	%	ASTM D570
Water Absorption (Saturation, 73°F)	2.2	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.50	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	0.50	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	203000	psi	ASTM D638
Tensile Modulus	189000	psi	ISO 527-1
Tensile Strength (Yield)	8120	psi	ASTM D638
Tensile Stress (Yield)	8120	psi	ISO 527-2
Tensile Elongation (Yield)	24	%	ASTM D638
Tensile Strain (Yield)	24	%	ISO 527-2
Tensile Elongation (Break)	> 200	%	ASTM D638
Tensile Strain (Break)	> 200	%	ISO 527-2
Flexural Modulus	181000	psi	ASTM D790
Flexural Modulus	174000	psi	ISO 178
Flexural Strength	7250	psi	ASTM D790
Flexural Stress	7250	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	1.9	ft·lb/in²	
73°F	9.0	ft·lb/in²	
Charpy Unnotched Impact Strength	No Break		ISO 179/1eU
Notched Izod Impact			ASTM D256
-22°F	0.97	ft·lb/in	
73°F	4.5	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	1.9	ft·lb/in²	
73°F	9.5	ft·lb/in²	

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Unnotched Izod Impact	No Break		ASTM D256
Unnotched Izod Impact Strength	No Break		ISO 180/1U
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness	105		ASTM D785
Shore Hardness (Shore D)	78		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	374	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Unannealed)	365	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	194	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed)	176	°F	ISO 75-2/A
Vicat Softening Temperature	374	°F	ASTM D1525 [2]
Vicat Softening Temperature	374	°F	ISO 306/B50
Melting Temperature	432	°F	ISO 11357-3
Melting Temperature	432	°F	ASTM D3418
CLTE - Flow	5.2E-5	in/in/°F	ASTM E831
CLTE - Transverse	5.6E-5	in/in/°F	ASTM E831
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+18	ohms	ASTM D257
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
0.0787 in	510	V/mil	
0.118 in	410	V/mil	
Dielectric Constant (60 Hz)	6.20		ASTM D150
Dissipation Factor (60 Hz)	0.014		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.031 in)	HB		UL 94

Processing Information

Extrusion	**Nominal Value**	**Unit**
Drying Temperature	176	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.20	%
Cylinder Zone 1 Temp.	464	°F
Cylinder Zone 2 Temp.	464	°F
Cylinder Zone 3 Temp.	455	°F
Cylinder Zone 4 Temp.	446	°F
Cylinder Zone 5 Temp.	446	°F
Adapter Temperature	428	°F
Melt Temperature	428 to 464	°F
Die Temperature	428	°F
Screw Compression Ratio	2.5:1.0 to 3.0:1.0	

Extrusion Notes

Jacket Temperature: < 50°C
Screw L/D ratio: > 26

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Loading 2 (50 N)

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