

**POKETONE M710F**

 Hyosung Chemical Corporation - *Polyketone, Aliphatic*
**General Information**
**Product Description**

Food &amp; drug extrusion grade

**General**

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Features	• Food Contact Acceptable
Uses	• Non-specific Food Applications
Agency Ratings	• ACS • KTW • USP Class VI • FDA FCN 1847 • NSF STD-51 • WRAS • ISO 10993 • NSF STD-61
RoHS Compliance	• RoHS Compliant
Processing Method	• Extrusion

**Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.22		ASTM D792
Density	1.22	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/2.16 kg)	2.8	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.118 in)	0.017	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.118 in)	0.017	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	138000	psi	ASTM D638
Tensile Modulus	131000	psi	ISO 527-1
Tensile Strength (Yield)	6240	psi	ASTM D638
Tensile Stress (Yield)	6240	psi	ISO 527-2
Tensile Elongation (Yield)	19	%	ASTM D638
Tensile Strain (Yield)	19	%	ISO 527-2
Tensile Elongation (Break)	> 200	%	ASTM D638
Tensile Strain (Break)	> 200	%	ISO 527-2
Flexural Modulus	131000	psi	ASTM D790
Flexural Modulus	123000	psi	ISO 178
Flexural Strength	5800	psi	ASTM D790
Flexural Stress	5800	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	1.4	ft·lb/in <sup>2</sup>	
73°F	6.7	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength	No Break		ISO 179/1eU
Notched Izod Impact			ASTM D256
-22°F	0.94	ft·lb/in	
73°F	3.7	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A



-22°F	1.9 ft·lb/in <sup>2</sup>	
73°F	7.1 ft·lb/in <sup>2</sup>	
Unnotched Izod Impact	No Break	ASTM D256
Unnotched Izod Impact Strength	No Break	ISO 180/1U
<b>Hardness</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Rockwell Hardness	105	ASTM D785
Shore Hardness (Shore D)	75	ISO 868
<b>Thermal</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (66 psi, Unannealed)	311 °F	ASTM D648
Deflection Temperature Under Load (66 psi, Unannealed)	284 °F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	167 °F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed)	149 °F	ISO 75-2/A
Vicat Softening Temperature	311 °F	ASTM D1525 <sup>2</sup>
Vicat Softening Temperature	306 °F	ISO 306/B50
Peak Melting Temperature	387 °F	ASTM D3418
Melting Temperature	387 °F	ISO 11357-3
CLTE - Flow (77 to 131°F)	5.6E-5 in/in/°F	ASTM E831
<b>Electrical</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Surface Resistivity	1.0E+17 ohms	ASTM D257
Volume Resistivity	1.0E+14 ohms·cm	ASTM D257
Dielectric Strength		ASTM D149
0.0787 in	480 V/mil	
0.118 in	380 V/mil	
Dielectric Constant (60 Hz)	6.40	ASTM D150
Dissipation Factor (60 Hz)	0.014	ASTM D150
<b>Flammability</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Flame Rating (0.031 in)	HB	UL 94

### Processing Information

<b>Extrusion</b>	<b>Nominal Value Unit</b>
Drying Temperature	176 °F
Drying Time	3.0 to 4.0 hr
Suggested Max Moisture	0.20 %
Cylinder Zone 1 Temp.	446 °F
Cylinder Zone 2 Temp.	437 °F
Cylinder Zone 3 Temp.	419 °F
Cylinder Zone 4 Temp.	410 °F
Cylinder Zone 5 Temp.	410 °F
Adapter Temperature	410 °F
Melt Temperature	410 to 446 °F
Die Temperature	410 °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

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Loading 2 (50 N)

