POKETONE M330S

Hyosung Chemical Corporation - *Polyketone, Aliphatic*

General Information

Product Description			
High-flow injection molding grade			
General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• High Flow		
Agency Ratings	• ISO 10993	• KTW	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		

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)	60	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (240°C/2.16 kg)	56	cm³/10min	ISO 1133
Molding Shrinkage - Flow			ASTM D955
0.0787 in	0.016	in/in	
0.118 in	0.020	in/in	
Molding Shrinkage - Across Flow			ASTM D955
0.0787 in	0.015	in/in	
0.118 in	0.020	in/in	
Water Absorption (Saturation)	2.1	%	ASTM D570
Water Absorption (Saturation, 73°F)	2.1	%	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	232000	psi	ASTM D638
Tensile Modulus	218000	psi	ISO 527-1
Tensile Strength (Yield)	8700	psi	ASTM D638
Tensile Stress (Yield)	8700	psi	ISO 527-2
Tensile Elongation (Yield)	21	%	ASTM D638
Tensile Strain (Yield)	21	%	ISO 527-2
Tensile Elongation (Break)	> 200	%	ASTM D638
Tensile Strain (Break)	> 200	%	ISO 527-2
Flexural Modulus	218000	psi	ASTM D790
Flexural Modulus	203000	psi	ISO 178
Flexural Strength	8270	psi	ASTM D790
Flexural Stress	8270	psi	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	0.95	ft·lb/in²	
14°F	1.9	ft·lb/in²	
73°F	3.8	ft·lb/in²	
Charpy Unnotched Impact Strength	No Break		ISO 179/1eU
Notched Izod Impact			ASTM D256
-22°F	0.75	ft·lb/in	

14°F	1.1	ft·lb/in	
73°F	1.8	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	1.4	ft·lb/in²	
14°F	1.9	ft·lb/in²	
73°F	3.3	ft·lb/in²	
Unnotched Izod Impact	No Break		ASTM D256
Unnotched Izod Impact Strength	No Break		ISO 180/1U
Multi-Axial Instrumented Impact Energy (73°F)	36.9	ft·lb	ISO 6603-2
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness	110		ASTM D785
Shore Hardness (Shore D)	77		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	392	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Unannealed)	374	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	221	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed)	198	°F	ISO 75-2/A
Vicat Softening Temperature	383	°F	ASTM D1525 [2]
Vicat Softening Temperature	383	°F	ISO 306/B50
Melting Temperature (DSC)	432	°F	ISO 11357
Melting Temperature	432	°F	ASTM D3418
CLTE - Flow (77 to 131°F)	5.4E-5	in/in/°F	ASTM E831
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+18	ohms	ASTM D257
Volume Resistivity	1.0E+13	ohms·cm	ASTM D257
Dielectric Strength	580	V/mil	ASTM D149
Dielectric Constant (60 Hz)	6.20		ASTM D150
Dielectric Constant (60 Hz)	5.00		IEC 60250
Dissipation Factor (60 Hz)	8.0E-3		ASTM D150
Dissipation Factor (60 Hz)	0.013		IEC 60250
Arc Resistance	PLC 4		ASTM D495
Comparative Tracking Index	PLC 0		ASTM D3638
High Amp Arc Ignition (HAI) (0.03 in)	PLC 0		UL 746A
High Voltage Arc Tracking Rate (HVTR)	PLC 0		UL 746A
Hot-wire Ignition (HWI)			UL 746A
0.03 in	PLC 4		
0.06 in	PLC 3		
0.12 in	PLC 2		
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.031 in)	HB		UL 94
Glow Wire Flammability Index (0.031 in)	1290	°F	IEC 60695-2-12
Glow Wire Ignition Temperature (0.031 in)	1340	°F	IEC 60695-2-13

Processing Information

Injection	**Nominal Value**	**Unit**
Drying Temperature	176	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.20	%
Rear Temperature	410	°F
Middle Temperature	419 to 428	°F
Front Temperature	446	°F
Nozzle Temperature	464	°F
Processing (Melt) Temp	437 to 464	°F
Mold Temperature	140 to 176	°F
Back Pressure	42.7 to 99.6	psi
Screw Speed	50 to 100	rpm