

Eastar™ MN004

Copolyester
Eastman Chemical Company

Message:

Eastar™ Copolyesters are brilliantly clear polymers that have excellent impact strength, chemical resistance, dimensional stability, and low shrinkage rates. Eastar™ MN004 contains a mold release.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.

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General Information			
Additive	Mold Release		
Features	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Impact Resistance		
	Good Mold Release		
	High Clarity		
	Low Shrinkage		
Uses	Medical/Healthcare Applications		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.23	g/cm ³	ASTM D792
23°C	1.23	g/cm ³	ISO 1183
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.50	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.13	%	ASTM D570, ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	105		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield, 23°C	45.0	MPa	ASTM D638
Yield, 23°C, 4.00 mm	46.0	MPa	ISO 527-2
Break, 23°C	52.0	MPa	ASTM D638
Break, 23°C, 4.00 mm	47.0	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	5.0	%	ASTM D638
Yield, 23°C, 4.00 mm	4.4	%	ISO 527-2

Break, 23°C	330	%	ASTM D638
Break, 23°C, 4.00 mm	230	%	ISO 527-2
Flexural Modulus			
23°C	1800	MPa	ASTM D790
23°C, 4.00 mm	1800	MPa	ISO 178
Flexural Stress			
23°C, 4.00 mm	63.0	MPa	ISO 178
Yield, 23°C	66.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
-40°C	64	J/m	ASTM D256
23°C	No Break		ASTM D256
-40°C	7.4	kJ/m ²	ISO 180
23°C	130	kJ/m ²	ISO 180
Unnotched Izod Impact			ASTM D4218
-40°C	No Break		
23°C	No Break		
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-40°C, Energy to Peak Force	16.0	J	
23°C, Energy to Peak Force	14.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	74.0	°C	ASTM D648, ISO 75-2/B
1.8 MPa, Unannealed	64.0	°C	ASTM D648
1.8 MPa, Unannealed	65.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	88.0	°C	ASTM D1525, ISO 306/A 2 1
--	79.0	°C	ISO 306/B
Specific Heat			DSC
60°C	1340	J/kg/°C	
240°C	2050	J/kg/°C	
Thermal Conductivity (23°C)	0.19	W/m/K	ASTM C177
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.60 mm	HB		
3.20 mm	HB		
Optical	Nominal Value	Unit	Test Method
Transmittance			ASTM D1003
Total	89.0	%	
Regular	87.0	%	
Haze	< 1.0	%	ASTM D1003

Injection	Nominal Value	Unit
Drying Temperature	75.0	°C
Drying Time	6.0	hr
Processing (Melt) Temp	250 to 270	°C
Mold Temperature	15.0 to 40.0	°C

NOTE

1. Loading 1 (10 N)

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