

DuraStar™ MN631

Thermoplastic Polyester
Eastman Chemical Company

Message:

DuraStar™ Polymer MN631 has been tested for FDA/ISO 10993 and USP Class VI Biological Evaluation testing after Gamma and EtO sterilization. It contains a mold release. It has excellent appearance and is nearly water-clear. Its most outstanding features are toughness, chemical resistance, and excellent processing characteristics. MN631 has very good toughness. Easy to process with minimal drying time, it flows readily and fills the most intricate tools.

General Information			
UL YellowCard	E118289-220150		
Additive	Mold Release		
Features	E-beam Sterilizable		
	Good Chemical Resistance		
	Good Flow		
	Good Processability		
	Good Toughness		
	High Clarity		
	Pleasing Surface Appearance		
	Radiation Sterilizable		
Uses	Medical/Healthcare Applications		
Appearance	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Molding Shrinkage - Flow	0.30	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.15	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	107		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 23°C	50.0	MPa	
Break, 23°C	43.0	MPa	
Tensile Elongation			ASTM D638
Yield, 23°C	5.0	%	
Break, 23°C	270	%	
Flexural Modulus (23°C)	1900	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	68.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact			ASTM D256
-40°C	44	J/m	
23°C	80	J/m	
Unnotched Izod Impact			ASTM D4812
-40°C	No Break		
23°C	No Break		
Instrumented Dart Impact			ASTM D3763
-40°C, Energy at Peak Load	38.0	J	
23°C, Energy at Peak Load	40.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	73.0	°C	
1.8 MPa, Unannealed	66.0	°C	
Vicat Softening Temperature	86.0	°C	ASTM D1525 ¹
Optical	Nominal Value	Unit	Test Method
Transmittance (Total)	92.0	%	ASTM D1003
Haze	< 1.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	70.0	°C	
Drying Time	4.0	hr	
Processing (Melt) Temp	230 to 280	°C	
Mold Temperature	15.0 to 30.0	°C	
NOTE			

1. Loading 1 (10 N)

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