Spectar[™] Clear Copolyester

Copolyester

Eastman Chemical Company

Message:

Eastman Spectar[™] Clear is a copolyester, developed by Eastman to achieve measurably improved sheet clarity and edge color while maintaining the performance characteristics for which Eastman Spectar[™] copolyester has become known in the industry. It offers the thermoformability and ease of fabrication of Eastman Spectar[™] copolyester along with significantly improved clarity. Eastman Spectar[™] Clear also offers approximately double the notch impact strength, 50% higher instrumented impact strength and better chemical resistance when compared to traditional Spectar[™] Copolyester. This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED[®].

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General Information			
Features	Excellent Printability		
	Good Chemical Resistance		
	Good Crack Resistance		
	Good Toughness		
	High Clarity		
	High Impact Resistance		
	Low to No Odor		
Uses	Decorative Displays		
	Lighting Diffusers		
	Sheet		
Appearance	Clear/Transparent		
Forms	Pellets		
Processing Method	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Density	1.23	g/cm³	ASTM D1505
Water Absorption (23°C, 24 hr, 3.00 mm)	0.19	%	ASTM D570
Color			ASTM E313
а	-0.15		
b	0.34		
L	96		
Intrinsic Viscosity (23°C) ¹	0.73		Internal Method
Static Decay (23°C)	Failed to Discharge		ASTM D4470
Sheet Thickness	3.00	mm	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	107		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	1800	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 23°C	48.0	MPa	
Break, 23°C	53.0	MPa	
Tensile Elongation			ASTM D638
Yield, 23°C	5.0	%	
Break, 23°C	340	%	
Flexural Modulus (23°C)	2000	MPa	ASTM D790
Flexural Strength (23°C)	71.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	83	J/m	
0°C	110	J/m	
23°C	No Break		
Unnotched Izod Impact			ASTM D4812
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact			ASTM D3763
-30°C, Energy at Peak Load	52.0	J	
0°C, Energy at Peak Load	42.0	J	
23°C, Energy at Peak Load	41.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	77.0	°C	
1.8 MPa, Unannealed	73.0	°C	
Vicat Softening Temperature	86.0	°C	ASTM D1525
CLTE - Flow (23°C)	7.7E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+17	ohms	ASTM D257
Volume Resistivity (23°C)	1.0E+16	ohms·cm	ASTM D257
Arc Resistance	130	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Gloss (60°, 3000 µm)	150		ASTM D2457
Transmittance (Total, 3000 µm)	91.0	%	ASTM D1003
Haze (3000 µm)	0.50	%	ASTM D1003
Yellowness Index (3.00 mm)	0.81	YI	ASTM D1925
NOTE	0.81	YI	ASTM D1925

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