EASTMAN

Technical Data Sheet

Eastman Spectar™ Clear Copolyester

Applications

- Lenticular
- Lighting
- Skylights
- Strapping

Key Attributes

- Easy to print and decorate
- Excellent clarity
- Excellent thermoforming characteristics
- Good chemical resistance
- Odorless
- Outstanding impact resistance
- Outstanding toughness allows downgauging
- Resists chipping and cracking
- Versatile - easy to fabricate

Product Description

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®.
The GREENGUARD INDOOR AIR QUALITY CERTIFIED® Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute (GEI). GEI is an industry-independent, non-profit organization that oversees the GREENGUARD Certification Program. The GREENGUARD Certification Program is an industry independent, third-party testing program for low-emitting products and materials for indoor environments. For more information about GEI and to obtain printable certificates for Eastman™ Copolyesters, visit . Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.

Typical Properties

Property[a]	Test Method[b]	Typical Value, Units[c]
General		
Thickness of Sheet Tested		3 mm (0.118 in.)
Intrinsic Viscosity	EMN-A-AC-G-V-1	0.73
Density	D 1505	1.23 g/cm^3
Water Absorption, 24 h immersion	D 570	0.19 %
Electrical Properties		
Arc Resistance	D 495	130 sec
Static Decay Rate	D 4470	Failed to Discharge
Surface Resistivity	D 257	10^{17} ohms/square
Volume Resistivity	D 257	10^{16} ohm·cm
Mechanical Properties		
Tensile Strength @ Yield	D 638	48 MPa (6900 psi)
Tensile Strength @ Break	D 638	53 MPa (7700 psi)
Elongation @ Yield	D 638	5 %
Elongation @ Break	D 638	340 %
Tensile Modulus	D 638	1800 MPa (2.6 x 10^5 psi)
Flexural Strength		

@ 5% strain	D 790	71 MPa (10300 psi)
Flexural Modulus	D 790	2000 MPa (2.9 x 10^5 psi)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -30°C (-22°F)		NB
Izod Impact Strength, Notched		
@ 0°C (32°F)		113 J/m (2.2 ft·lbf/in.)
@ 23°C (73°F)	D 256	NB
@ -30°C (-22°F)		83 J/m (1.6 ft·lbf/in.)
Impact Resistance (Puncture), Energy @ Max. Load		
@ 0°C (32°F)		42 J (30 ft·lbf)
@ 23°C (73°F)	D 3763	41 J (29 ft·lbf)
@ -30°C (-22°F)		52 J (36 ft·lbf)
Rockwell Hardness, R Scale	D 785	107
Optical Properties		
Haze	D 1003	0.5 %
Gloss		
@ 60°	D 2457	150
Total Transmittance	D 1003	91 %
Yellowness Index	E 313	0.81
Color		
a*		-0.15
b*		0.34
L*	E 313	95.74
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)		77 °C (171 °F)
@ 1.82 MPa (264 psi)	D 648	73 °C (163 °F)
Vicat Softening Temperature	D 1525	86 °C (187 °F)
Coefficient of Linear Thermal Expansion	D 696	7.62 x 10^{-5} /°C (mm/mm·°C) (4.26 x 10^{-5} /°F (in./in.·°F))
UL Flammability Classification	UL 94	HB

[a]*Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.*
[b]*Unless noted otherwise, the test method is ASTM.*
[c]*Units are in SI or US customary units.*

Comments

Properties reported here are based on limited testing. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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