Product Data Sheet

Eastman TiGlaze™ ST Copolyester

Application/Uses

- Architectural glazing
- Lighting
- Skylights

Key Attributes

- CC1 "Light Transmitting Plastic" rating
- Excellent chemical resistance
- Passes UL972 for burglary resistant glazing in sheet form
- Strong, durable, and flexible
- UV stabilized for long-term outdoor performance

Product Description

Eastman TiGlaze™ copolyester was designed to respond to the needs of users, specifiers, and manufacturers in the Architectural Glazing industry. It offers a combination of strength, ease of fabrication, and flexibility in design for glazing applications such as skylights, vaults, shelters and building entries.

Eastman is introducing the joint offering for sale of Eastman TiGlaze ST™ copolyester and Eastman TiGlaze UV™ copolyester (which, when sold together, Eastman refers to as its Eastman TiGlaze ST™ copolyester system). Eastman also offers TiGlaze ST™ with Spectar UV™.

This sheet has received a notice of acceptance by the Miami-Dade County, Florida Building Code Compliance Office (Miami-Dade County, Florida NOA 08.0423.19, Expiration Date: 07/03/2013) for use in skylights.

*Eastman TiGlaze™ is only available in the United States.

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 www.greenguard.org. Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.

This product has been CRADLE TO CRADLE CERTIFIED^{cm} Silver.
The CRADLE TO CRADLE CERTIFIED^{cm} Mark is a registered certification mark used under license through McDonough Braungart Design Chemistry (MBDC). MBDC is a global sustainability consulting and product certification firm. The CRADLE TO CRADLE® framework moves beyond the traditional goal of reducing the negative impacts of commerce (‘eco-efficiency’), to a new paradigm of increasing its positive impacts (‘eco-effectiveness’). At its core, Cradle to Cradle design perceives the safe and productive processes of nature’s ‘biological metabolism’ as a model for developing a ‘technical metabolism’ flow of industrial materials. Product components can be designed for continuous recovery and reutilization as biological and technical nutrients within these metabolisms. For more information about MBDC and to obtain printable certificates for Eastman Copolyesters, visit www.mbdc.com. Choose Eastman Chemical Company under Company Name in C2C Certified products to display a list of our products.

Typical Properties

Property[a]	Test[b] Method	Typical Value, Units[c]
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%
Optical Properties		
Haze	D 1003	0.5%
Gloss @ 60°	D 2457	150
Total Transmittance	D 1003	91%
Yellowness Index	E 313	0.81
Color		
L*	E 313	95.74
a*		-0.15
b*		0.34
Thermal Properties		
Deflection Temperature		
@ 1.82 MPa (264 psi)	D 648	73°C (163°F)
@ 0.455 MPa (66 psi)		77°C (171°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	V-2
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 [d]		
@ 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		
@ 23°C (73°F)	D 3763	41 J (29 ft·lbf)
@ 0°C (32°F)		42 J (30 ft·lbf)
@ -30°C (-22°F)		52 J (36 ft·lbf)
Rockwell Hardness, R Scale	D 785	107

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

[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.*

[d] *Izod Impact Strength, Notched - 80% Complete Break @ 0°C (32°F)*

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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