ΕΛSTΜΛΝ



Eastman TREVA™ Engineering Bioplastic GC6011NAT Natural

Applications

- Color cosmetics packaging
- Personal care & cosmetics packaging
- Personal care packaging

Key Attributes

- BPA-free
- Dimensional stability
- Excellent chemical resistance
- Excellent flow
- Good clarity
- Low birefringence

Product Description

Eastman TREVA[™] is a cellulose-based engineering bioplastic that offers both high performance and enables exceptional depth of color and high gloss for opaque applications. TREVA is chemically resistant, dimensionally stable and has excellent flow, BPA-free and enables exceptional depth of color and high gloss for opaque applications.

The United States Department of Agriculture's (USDA's) <u>BioPreferred® program</u> has Certified Eastman TREVA[™] Engineering Bioplastic GC6011 with a biobased content of 45%.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^C
General Properties		
Specific Gravity	D 792	1.23
Mechanical Properties		
Tensile Stress @ Yield	D 638	55 MPa (7919 psi)
Tensile Stress @ Break	D 638	51 MPa (7353 psi)
Elongation @ Break	D 638	21 %
Flexural Modulus	D 790	2160 MPa (3.13 x 10 ⁵ psi)
Rockwell Hardness, R Scale	D 785	108
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	82 J/m (1.54 ft·lbf/in.)
@ -40°C (-40°F)	D 256	66 J/m (1.22 ft·lbf/in.)
Miscellaneous Properties		
Mold Shrinkage	D 955	0.7 %
Permanence Properties		
Water Absorption, 24 h immersion	D 570	2.3 %
Target Processing Conditions		
Drying Temperature in a Desiccant		75 °C (170 °F)
Dryer		
Drying Time in a Desiccant Dryer		4 hours
Barrel Set Temperature ^e		235 °C (455 °F)
Mold Temperature		85 °C (185 °F)
Injection Speed		30 mm/sec (1.2 in./sec)
Maximum Barrel Residence Time		4 minutes
Thermal Properties		
Deflection Temperature ^d		
@ 0.455 MPa (66 psi)	D 648	116 °C (240 °F)

@ 1.82 MPa (264 psi)	D 648	102 °C (215 °F)
Vicat Softening Temperature ^d	D 1525	131 °C (268 °F)

^aUnless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity. ^bUnless noted otherwise, the test method is ASTM. ^cUnits are in SI or US customary units. ^dConditioned 4 hours at 70°C (158°F).

^eWith actual measured melt temperature not to exceed 260°C (500°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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