EASTMAN

Technical Data Sheet

DuraStar™ Polymer DS1110UVI Natural

Applications

- Consumer housewares-nfc
- Lighting
- Sporting equipment
- Wood furniture

Key Attributes

- Excellent clarity
- Excellent flow
- Fast drying times
- Good chemical resistance
- Outstanding impact resistance
- Quick cycle times

Product Description

Durastar™ DS1110UVI polymer, contains an ultraviolet light stabilization package. It is recommended for indoor applications requiring enhanced color stability upon extended exposure to fluorescent light. It has excellent appearance and is nearly water-clear. Its other most outstanding features are chemical resistance and excellent processing characteristics. Easy to process, it flows readily, fills intricate molds, contains a mold release, and is well suited for thick-wall applications.
This product is certified to ANSI/NSF Standard 51.

Typical Properties

Property[a]	Test Method[b]	Typical Value, Units[c]
General Properties		
Specific Gravity	D 792	1.2
Density	ISO 1183	1.19 g/cm^3
Mold Shrinkage Parallel to Flow, 3.2-mm (0.125-in.) thickness	D 955	0.002-0.006 mm/mm (0.002-0.006 in./in.)
Mechanical Properties (ISO Method)		
Tensile Strength @ Yield	ISO 527	47 MPa
Tensile Strength @ Break	ISO 527	46 MPa
Elongation @ Yield	ISO 527	4 %
Elongation @ Break	ISO 527	200 %
Tensile Modulus	ISO 527	1800 MPa
Flexural Modulus	ISO 178	1850 MPa
Flexural Strength	ISO 178	65 MPa
Izod Impact Strength, Notched		
@ 23°C	ISO 180	7.8 kJ/m^2
@ -40°C	ISO 180	4.8 kJ/m^2
Impact Resistance (Puncture), Energy @ Max. Load		
@ 23°C	ISO 6603-2	58.7 J
@ -40°C	ISO 6603-2	52.6 J
Mechanical Properties		
Tensile Stress @ Yield	D 638	47 MPa (6900 psi)
Tensile Stress @ Break	D 638	51 MPa (7400 psi)
Elongation @ Yield	D 638	5 %
Elongation @ Break	D 638	300 %
Flexural Modulus	D 790	2000 MPa (2.9 x 10^5 psi)

Flexural Yield Strength	D 790	69 MPa (10000 psi)
Rockwell Hardness, R Scale	D 785	103
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	80 J/m (1.5 ft·lbf/in.)
@ -40°C (-40°F)	D 256	40 J/m (0.7 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB
Impact Resistance (Puncture), Energy @ Max. Load		
@ 23°C (73°F)	D 3763	42 J (31 ft·lbf)
@ -40°C (-40°F)	D 3763	48 J (35 ft·lbf)
Optical Properties		
Haze	D 1003	0.3 %
Regular Transmittance	D 1003	89 %
Total Transmittance	D 1003	91 %
Thermal Properties (ISO Method)		
Deflection Temperature		
@ 0.455 MPa (66 psi)	ISO 75	72 °C
@ 1.82 MPa (264 psi)	ISO 75	66 °C
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	75 °C (167 °F)
@ 1.82 MPa (264 psi)	D 648	65 °C (149 °F)
Typical Processing Conditions		
Drying Temperature		70 °C (160 °F)
Drying Time		3 hrs
Processing Melt Temperature		230-280 °C (450-530 °F)
Mold Temperature		15-30 °C (60-80 °F)

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

2/28/2018 11:35:39 AM