EASTMAN

Technical Data Sheet

DuraStar™ Polymer DS1910HF Natural

Applications

- Appliances (food contact)
- Chocolate molds
- Commercial housewares
- Consumer electronics
- Consumer housewares-nfc
- Displays/in-store fixtures
- Fragrance packaging
- Large appliances non-food contact
- Lighting
- Pens/stationary
- Personal care packaging
- Point-of-purchase
- Small appliances non-food contact
- Speciality containers-color cosmetics pk
- Sporting equipment
- Tools
- Toys

Key Attributes

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

Product Description

Durastar™ DS1910HF polymer is a high flow grade of Durastar™ that contains a mold release. Durastar™ DS1910HF flow lengths are increased 20-40% relative to Durastar™ DS1010 as shown by spiral flow testing. Other outstanding features of Durastar™ are easily maintained such as excellent appearance and clarity, good physical properties, chemical resistance, and easy processing. This high flow product is especially suited for those applications utilizing thin-walled intricate tools. Under existing United States Food and Drug Administration (FDA) regulations, Durastar™ DS1910HF may be used in food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240.
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	1.19
Mold Shrinkage	D 955	0.003 mm/mm (0.003 in./in.)
Water Absorption, 24 h immersion	D 570	0.15 %
Mechanical Properties		
Tensile Stress @ Yield	D 638	50 MPa (7200 psi)
Tensile Stress @ Break	D 638	43 MPa (6300 psi)
Elongation @ Yield	D 638	5 %
Elongation @ Break	D 638	270 %
Flexural Yield Strength	D 790	68 MPa (9800 psi)
Flexural Modulus	D 790	1900 MPa (2.7 x 10^5 psi)
Rockwell Hardness, R Scale	D 785	107
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	80 J/m (1.5 ft·lbf/in.)
@ -40°C (-40°F)	D 256	44 J/m (0.8 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	40 J (30 ft·lbf)
@ -40°C (-40°F)	D 3763	38 J (28 ft·lbf)
Optical Properties		
Total Transmittance	D 1003	92 %
Haze	D 1003	< 1 %
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	73 °C (163 °F)
@ 1.82 MPa (264 psi)	D 648	66 °C (150 °F)
Vicat Softening Temperature		
@ 1 kg load	D 1525	86 °C (186 °F)
Typical Processing Conditions		
Drying Temperature		70 °C (160 °F)
Drying Time		4 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