

## Product Data Sheet

### DuraStar™ Polymer DS1910HF, Natural

#### Application/Uses

- Appliances
- Floor care
- Furniture/Furniture trim
- Housewares
- In-mold decoration
- In-mold labeling
- Pen/stationary supplies
- Refrigerator interior components
- Toys/Sporting goods
- Washing machine components

#### 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 <sup>a</sup>	Test <sup>b</sup> Method	Typical Value, Units <sup>c</sup>
<b>General Properties</b>		
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%
<b>Mechanical Properties</b>		
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 <sup>5</sup> 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)
<b>Thermal Properties</b>		
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)
<b>Optical Properties</b>		
Total Transmittance	D 1003	92%
Haze	D 1003	< 1%
<b>Typical Processing Conditions</b>		
Drying Temperature		70°C (160°F)
Drying Time		4 hrs
Processing Melt Temperature		230-280°C (450-530°F)

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- 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.

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