

Product Data Sheet

DuraStar™ Polymer DS3010HF

Application/Uses

- In-mold decoration
- In-mold labeling

Key Attributes

- Excellent chemical resistance
- Excellent clarity and color
- Excellent flow
- Fast cycle times
- Good impact strength
- Good stiffness
- High gloss appearance
- Low processing temperatures
- Reduced drying times
- Toughness

Product Description

DuraStar™ DS3010HF copolyester is a high flow product that contains a mold release. Its most outstanding features are excellent color and clarity and the ability to process at lower melt temperatures than typical copolyesters. Other outstanding features of DS3010HF are excellent chemical resistance, high gloss, and improvements in processing such as faster drying times, faster cycle times, and lower scrap rates.

Typical Properties

Property <sup>a</sup>	Test <sup>b</sup> Method	Typical Value, Units <sup>c</sup>
General Properties		
Specific Gravity	D 792	1.20 g/cm <sup>3</sup>
Mold Shrinkage	D 955	0.003 mm/mm
Mechanical Properties		
Tensile Stress @ Yield	D 638	50 MPa (7210 psi)
Tensile Stress @ Break	D 638	35 MPa (6240 psi)
Elongation @ Yield	D 638	4.5%
Elongation @ Break	D 638	193%
Flexural Modulus	D 790	1800 MPa (2.60 x 10 <sup>5</sup> psi )
Flexural Strength	D 790	67 MPa (9717 psi)
Rockwell Hardness, R Scale	D 785	105
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	70 J/m (1.3 ft·lbf/in.)

@ -40°C	D 256	38 J/m (.70 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -40°C	D 4812	NB
Impact Resistance (Puncture), Energy @ Max. Load @ 23°C	D 3763	40 J (30 ft lbf/f)

### Thermal Properties

Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	71°C (160°F)
@ 1.82 MPa (264 psi)	D 648	63°C (145°F)

### Optical Properties

Total Transmittance	D 1003	90%
Haze	D 1003	<.6%

### Typical Processing Conditions

Drying Temperature	60°C (140°F)
Drying Time	2-4 hrs
Processing Melt Temperature	225-245°C (440-470°F)
Mold Temperature	16-50°C (60-120°F)

<sup>a</sup> Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

<sup>b</sup> Unless noted otherwise, the test method is ASTM.

<sup>c</sup> Units are in SI or US customary units.

### Applications

In-mold decoration, In-mold labeling

### General

Durastar DS3010HF copolyester is a high flow product that contains a mold release. Its most outstanding features are excellent color and clarity and the ability to process at lower melt temperatures than typical copolyesters. Other outstanding features of DS3010HF are excellent chemical resistance, high gloss, and improvements in processing such as faster drying times, faster cycle times, and lower scrap rates.

### 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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