

# Technical Data Sheet

## Eastman™ Copolyester 13319

### Applications

- Auto plastics
- Compounders
- Consumer electronics
- Fibers
- Industrial
- Lighting
- Packaging components non food contact
- Sporting equipment
- Strapping

### Product Description

Eastman™ Copolyester 13319 has a high melting point, low extractables, and good hydrolytic stability. 13319 is suitable for food packaging applications.

### Typical Properties

Property <sup>a</sup>	Test Method <sup>b</sup>	Typical Value, Units <sup>c</sup>
<b>Film Properties (Oriented 3X)</b>		
Thickness of Film Tested		25 Microns (1 mils)
Density (film)	D 1505	1.21 g/cm <sup>3</sup>
Haze	D 1003	4.2 %
Gloss @ 45°	D 2457	109
Regular Transmittance	D 1003	91 %
Elmendorf Tear Resistance		
M.D.	D 1922	25 gf
T.D.	D 1922	20 gf
Tensile Strength @ Break		
M.D.	D 882	145 MPa (21000 psi)
Elongation @ Break		
M.D.	D 882	30 %
Tensile Modulus		
M.D.	D 882	2280 MPa (3.3 x 10 <sup>5</sup> psi)
Coefficient of Friction <sup>g</sup>	D 1894	0.5
Water Vapor Transmission Rate	F 372	2.3 g/m <sup>2</sup> ·24h (0.15 g/100in. <sup>2</sup> ·24h)
Gas Permeability, O <sub>2</sub>	D 3985	21 cm <sup>3</sup> ·mm/m <sup>2</sup> ·24h·atm (53 cm <sup>3</sup> ·mil/100in. <sup>2</sup> ·24h·atm)
<b>Pellet Properties</b>		
Inherent Viscosity <sup>d</sup>	EMN-A-AC-G-V-1	0.96
Density <sup>e</sup>	D 1505	1.195 g/cm <sup>3</sup>
Bulk Density <sup>f</sup>	D 1895	739 kg/m <sup>3</sup> (46 lb/ft <sup>3</sup> )
Melt Density		
@ 300°C (572°F)	D 1238 (Note A- Table 2)	1.09 g/cm <sup>3</sup>
Glass Transition Temperature (T <sub>g</sub> )	DSC	92 °C (198 °F)
Crystalline Peak Melting Point (T <sub>m</sub> )	D 3418	285 °C (545 °F)

Heat of Fusion	E 793	67 kJ/kg (16 cal/g)
Thermal Conductivity	C 177	0.21 W/m·K (1.5 Btu·in./h·ft <sup>2</sup> ·°F)
Specific Heat		
@ 130°C (266°F)	DSC	1.8 kJ/kg·K (0.43 Btu/lb·°F)
@ 180°C (356°F)	DSC	2 kJ/kg·K (0.48 Btu/lb·°F)
@ 250°C (482°F)	DSC	2.2 kJ/kg·K (0.53 Btu/lb·°F)
@ 50°C (122°F)	DSC	1.5 kJ/kg·K (0.36 Btu/lb·°F)
<b>Typical Processing Conditions</b>		
Drying Temperature		121 °C (250 °F)
Drying Time <sup>h</sup>		4 hrs
Extrusion Temperature		299-302 °C (570-576 °F)
Injection Molding Temperature		299-316 °C (570-600 °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.

<sup>d</sup>Inherent viscosity of film (as extruded) 0.84; film thickness 125 microns (5 mils).

<sup>e</sup>Amorphous

<sup>f</sup>Poured

<sup>g</sup>Film-to-Film

<sup>h</sup>At Dew Point -29°C to -40°C (-20°F to -40°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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