

Technical Data Sheet

Eastman Embrace™ High Yield HY1000 Compound

Chemical Synonym

Copolyester

Applications

- Home, garden & automotive packaging
- Labels non food contact
- Shrink film food contact
- Shrink film non food contact

Key Attributes

- Eye-catching 360° graphic capability
- Noise-free shrink film for squeezable condiment packages
- Shrink film density less than 1.0g/cc
- Soft touch for easy grip
- UV and visible light protection
- Up to 70% ultimate shrinkage

Product Description

Eastman Embrace™ High Yield is combined with Eastman Embrace™ LV copolyester to create a white opaque microvoided shrinkable film. Embrace High Yield has a density below 1.0 g/cc with a high ultimate shrinkage up to 70%. Benefits of Embrace High Yield such as UV and visible light protection, and optimum MD growth that is ~30% less dense than other copolyesters, enabling more film per weight, offer a robust packaging solution that is appealing to the consumer and functional for the brand owner. Unique shelf appeal, marketing benefits of full body shrink film labels along with the ability to shrink around highly contoured containers makes Eastman Embrace HY™ copolyester another new and fresh idea from Eastman Chemical Company that will further differentiate your product.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.

The GREENGUARD INDOOR AIR QUALITY CERTIFIED® Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute (GEI). GEI is an industry-independent, non-profit organization that oversees the GREENGUARD Certification Program. The GREENGUARD Certification Program is an industry independent, third-party testing program for low-emitting products and materials for indoor environments. For more information about GEI and to obtain printable certificates for Eastman™ Copolyesters, visit [www.geiconsulting.com](#). Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
Film Properties (Oriented Film)		
Thickness of Film Tested		63.5 Microns (2.5 mils)
Density	D 1505	0.89 g/cm ³
Color (CIELAB, D65, 10°)		
a*		-0.17
b*		-0.26
L*	E 1331	93.4
Opacity		91.4
Yellowness Index	E 313	1.71
Gloss		
@ 60°	D 2457	8
Water Vapor Transmission Rate ^d	F 1249	38.2 g/m ² ·24h (2.5 g/100in. ² ·24h)
Gas Permeability, CO ₂		
@ 30°C (86°F), 68% RH	D 1434	42.7 cm ³ ·mm/m ² ·24h·atm (108.5

		cm ³ ·mil/100in. ² ·24h·atm)
Gas Permeability, O ₂ @ 30°C (86°F), 68%, 100% RH D 3985		10.4 cm ³ ·mm/m ² ·24h·atm (26.4 cm ³ ·mil/100in. ² ·24h·atm)
Tensile Strength @ Break		
M.D.	D 882	23 MPa (3400 psi)
T.D.		117 MPa (17000 psi)
Elongation @ Break		
M.D.	D 882	380 %
T.D.		22 %
Tensile Modulus		
M.D.	D 882	850 MPa (1.2 x 10 ⁵ psi)
T.D.		3000 MPa (4.3 x 10 ⁵ psi)
Glass Transition Temperature (T _g) ^f		77 °C (171 °F)
Surface Tension, Harmonic Mean ^e		
Dispersive		36.3 dynes/cm
Total		36.3 dynes/cm
Shrinkage @ 95°C, 10 seconds		
M.D.		-1 %
T.D.		73 %
UV Transmittance ^g		
@ 300 nm		0.2 %
@ 325 nm		6.0 %
@ 350 nm		9.8 %
@ 375 nm		11.5 %
@ 400 nm		12.5 %

^aUnless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^bUnless noted otherwise, the test method is ASTM.

^cUnits are in SI or US customary units.

^dTest conducted at 38°C (100°F) and 100% relative humidity.

^eEastman test method ECRL-A-PA-G-TEN-3-2

^fEastman test method EMNR-A-AS-G-DTP-1-1; 2nd heating scan

^gUV Transmittance generated utilizing an integrating sphere; performed on sample of Embrace Copolyester + 25% High Yield HY1000 Compound.

Comments

Properties reported here are based on limited testing. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

Eastman and its marketing affiliates shall not be responsible for the use of this information, or of any product, method, or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability of fitness of any product, and nothing herein waives any of the Seller's conditions of sale.

2/28/2018 11:35:39 AM