

Technical Data Sheet

Estar™ Copolyester GN078

Applications

- Closures-fragrance pkg
- Consumer housewares-nfc
- Fragrance packaging
- Home, garden & automotive packaging
- Jars-skin care pkg
- Non-medical housings & hardware for elec
- Personal care & cosmetics packaging
- Speciality containers-color cosmetics pk
- Walls

Product Description

Estar™ Copolyester GN078 has superior water clarity. It also has superior chemical resistance among the copolyester portfolio and is an excellent product for large tough bottles. Eastar™ Copolyester GN078 is an environmentally responsible material that contains no halogens or orthophthalate plasticizers.

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.gei.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
General Properties		
Density	D 792	1.25 g/cm ³
Mold Shrinkage	D 955	0.3 %
Mechanical Properties		
Tensile Stress @ Yield	D 638	47 MPa (6900 psi)
Tensile Stress @ Break	D 638	48 MPa (7000 psi)
Elongation @ Yield	D 638	5 %
Elongation @ Break	D 638	300 %
Tensile Modulus	D 638	1900 MPa (2.7 x 10 ⁵ psi)
Flexural Modulus	D 790	1900 MPa (2.7 x 10 ⁵ psi)
Flexural Strength	D 790	65 MPa (9400 psi)
Rockwell Hardness, R Scale	D 785	105
Izod Impact Strength, Notched ^d		
@ 23°C (73°F)	D 256	NB
@ -40°C (-40°F)	D 256	63C J/m (1.2C ft·lbf/in.)
Impact Strength, Unnotched ^e		
@ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB
Impact Resistance (Puncture), Energy @ Max. Load		41 J (30 ft·lbf)

@ 0°C (32°F)	D 3763	
@ 23°C (73°F)	D 3763	41 J (30 ft·lbf)
@ -40°C (-40°F)	D 3763	39 J (29 ft·lbf)
Optical Properties		
Haze	D 1003	1.3 %
Gloss		
@ 60°	D 2457	143
Regular Transmittance	D 1003	87 %
Total Transmittance	D 1003	91 %
Color		
a*	D 2244	-0.2
b*	D 2244	0.6
L*	D 2244	95.0
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	73 °C (163 °F)
@ 1.82 MPa (264 psi)	D 648	63 °C (145 °F)
Vicat Softening Temperature	D 1525	85 °C (185 °F)

^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.

^dC = Complete Break; Nonbreak as defined by ASTM D 256.

^eNonbreak as defined by ASTM D 4812.

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.

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