

Technical Data Sheet

Eastman Tritan™ Copolyester LX101

Applications

- Bottles-color cosmetics pkg
- Bottles-fragrance pkg
- Closures-fragrance pkg
- Color cosmetics packaging
- Fragrance packaging
- Jars-skin care pkg
- Personal care & cosmetics packaging
- Personal care bottles
- Personal care packaging
- Skin care packaging

Key Attributes

- Ease of processing
- Excellent clarity
- Fast drying times
- Good chemical resistance
- Good heat resistance
- Outstanding impact resistance
 - Quick cycle times

Product Description

Eastman Tritan™ LX101 is an amorphous copolyester with excellent appearance and clarity. Tritan™ LX101 contains a mold release derived from vegetable based sources. Its most outstanding features are excellent toughness, hydrolytic stability, and heat and chemical resistance. Tritan™ LX101 was developed for the cosmetic, fragrance, and personal care markets. Tritan™ LX101 can easily be converted into articles for application in Consumer and Personal Care markets by injection molding, extrusion blow molding, and injection blow molding.

Typical Properties

| Property ^a | Test Method ^b | Typical Value, Units ^c |
|--|--------------------------|---|
| General Properties | | |
| Specific Gravity | D 792 | 1.18 |
| Mold Shrinkage | D 955 | 0.005-0.007 mm/mm (0.005-0.007 in./in.) |
| Mechanical Properties | | |
| Tensile Stress @ Yield | D 638 | 43 MPa (6200 psi) |
| Tensile Stress @ Break | D 638 | 53 MPa (7700 psi) |
| Elongation @ Yield | D 638 | 6 % |
| Elongation @ Break | D 638 | 210 % |
| Tensile Modulus | D 638 | 1550 MPa (2.25 x 10 ³ psi) |
| Flexural Modulus | D 790 | 1550 MPa (2.25 x 10 ³ psi) |
| Flexural Yield Strength | D 790 | 62 MPa (9000 psi) |
| Rockwell Hardness, R Scale | D 785 | 112 |
| Izod Impact Strength, Notched | | |
| @ 23°C (73°F) | D 256 | 980 J/m (18.4 ft·lbf/in.) |
| @ -40°C (-40°F) | D 256 | 110 J/m (2.1 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 | 61 J (45 ft·lbf) |
| @ -40°C (-40°F) | D 3763 | 66 J (49 ft·lbf) |
| Optical Properties | | |
| Total Transmittance | D 1003 | 90 % |
| Haze | D 1003 | <1 % |
| Thermal Properties | | |

| | | |
|------------------------|-------|----------------|
| Deflection Temperature | | |
| @ 0.455 MPa (66 psi) | D 648 | 99 °C (210 °F) |
| @ 1.82 MPa (264 psi) | D 648 | 85 °C (185 °F) |

Typical Processing Conditions

| | |
|-----------------------------|-------------------------|
| Drying Temperature | 88 °C (190 °F) |
| Drying Time | 4-6 hrs |
| Processing Melt Temperature | 260-282 °C (500-540 °F) |
| Mold Temperature | 38-66 °C (100-150 °F) |

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

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