



# Technical Data Sheet

## Eastman Tritan™ Copolyester TX1501HF

**Application/Uses**

- Appliances
- Consumer goods
- Durable goods
- Housewares
- In-mold decoration
- In-mold labeling

**Key Attributes**

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

**Product Description**

Eastman Tritan™ copolyester TX1501HF is a high flow grade of Eastman Tritan™. Eastman Tritan™ copolyester TX1501HF has viscosity reductions of 40-50% relative to Eastman Tritan™ copolyester TX1001. Eastman Tritan™ copolyester TX1501HF contains a mold release derived from vegetable based sources. Other outstanding features include good toughness, hydrolytic stability, and heat and chemical resistance. Eastman Tritan™ copolyester TX1501HF may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Eastman Tritan™ copolyester TX1501HF is certified to NSF/ANSI Standard 51 for Food Equipment Materials and is also certified to NSF/ANSI Standard 61 - Drinking Water System Components-Health Effects.

**Typical Properties (Preliminary)**

| Property <sup>a</sup>                | Test <sup>b</sup> Method | Typical Value, Units <sup>c</sup>       |
|--------------------------------------|--------------------------|---|
| <b>General Properties</b>            |                          |   |
| Specific Gravity                     | D 792                    | 1.18                                    |
| Mold Shrinkage                       | D 955                    | 0.005-0.007 mm/mm (0.005-0.007 in./in.) |
| <b>Mechanical Properties</b>         |                          |   |
| Tensile Stress @ Yield               | D 638                    | 43 MPa (6200 psi)                       |
| Tensile Stress @ Break               | D 638                    | 52 MPa (7500 psi)                       |
| Elongation @ Yield                   | D 638                    | 7%                                      |
| Elongation @ Break                   | D 638                    | 210%                                    |
| Tensile Modulus                      | D 638                    | 1575 MPa (2.28 x 10 <sup>5</sup> psi )  |
| Flexural Modulus                     | D 790                    | 1575 MPa (2.28 x 10 <sup>5</sup> psi )  |
| Flexural Yield Strength              | D 790                    | 64 MPa (9300 psi)                       |
| Rockwell Hardness, R Scale           | D 785                    | 111                                     |
| Izod Impact Strength, Notched @ 23°C | D 256                    | 860 J/m (16.1 ft·lbf/in.)               |

(73°F)

Impact Strength, Unnotched @ 23°C (73°F) D 4812 NB

### Mechanical Properties (ISO Method)

|                               |         |                      |
|-------------------------------|---------|----------------------|
| Tensile Strength @ Yield      | ISO 527 | 44 MPa               |
| Tensile Strength @ Break      | ISO 527 | 49 MPa               |
| Elongation @ Yield            | ISO 527 | 7%                   |
| Elongation @ Break            | ISO 527 | 154%                 |
| Tensile Modulus               | ISO 527 | 1604 MPa             |
| Flexural Modulus              | ISO 178 | 1502 MPa             |
| Flexural Strength             | ISO 178 | 60 MPa               |
| Izod Impact Strength, Notched |         |                      |
| @ 23°C                        | ISO 180 | 83 kJ/m <sup>2</sup> |
| @ -40°C                       | ISO 180 | 11 kJ/m <sup>2</sup> |

### Thermal Properties

|                        |       |              |
|------------------------|-------|--------------|
| Deflection Temperature |       |              |
| @ 0.455 MPa (66 psi)   | D 648 | 94°C (201°F) |
| @ 1.82 MPa (264 psi)   | D 648 | 81°C (178°F) |

### Optical Properties

|                     |        |     |
|---------------------|--------|-----|
| Total Transmittance | D 1003 | 91% |
| Haze                | D 1003 | <1% |

### 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)   |

<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.

### 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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