

Technical Data Sheet

Estar™ Polyester EN052

Applications

- Commercial housewares
- Compounders
- Point-of-purchase

Product Description

Estar™ Polyester EN052 is a thermoplastic condensation homopolymer produced by a continuous melt-phase polymerization process followed by a solid-state polymerization process. It has been crystallized.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.

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Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
Injection Molded Properties		
Specific Gravity	D 792	1.32
Water Absorption, 24 h immersion	D 570	0.1 %
Mold Shrinkage Parallel to Flow, 3.2-mm (0.125-in.) thickness	D 955	0.004 mm/mm (0.004 in./in.)
Tensile Stress @ Yield	D 638	57 MPa (8300 psi)
Tensile Stress @ Break	D 638	26 MPa (3800 psi)
Elongation @ Yield	D 638	4 %
Flexural Modulus	D 790	2500 MPa (3.6 x 10 ⁵ psi)
Flexural Yield Strength	D 790	81 MPa (11700 psi)
Rockwell Hardness, R Scale	D 785	110
Izod Impact Strength, Notched @ 23°C (73°F)	D 256	51 J/m (1.0 ft·lbf/in.)
@ -40°C (-40°F)	D 256	36 J/m (0.7 ft·lbf/in.)
Impact Strength, Unnotched @ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB
Deflection Temperature @ 0.455 MPa (66 psi)	D 648	66 °C (151 °F)
@ 1.82 MPa (264 psi)	D 648	62 °C (144 °F)
Vicat Softening Temperature @ 1 kg load	D 1525	79 °C (174 °F)
Dielectric Constant 1 kHz	D 150	3.2

1 MHz	D 150	3.0
Dissipation Factor		
1 kHz	D 150	0.008
1 MHz	D 150	0.02
Arc Resistance	D 495	155 sec
Volume Resistivity	D 257	10 ¹⁶ ohm·cm
Surface Resistivity	D 257	10 ¹⁶ ohms/square
Dielectric Strength, Short Time, 500 V/sec rate-of-rise	D 149	15.7 kV/mm (400 V/mil)
Typical Processing Conditions		
Drying Temperature		150-160 °C (300-320 °F)
Drying Time		4-6 hrs
Processing Melt Temperature		275-295 °C (530-565 °F)
Mold Temperature		10-30 °C (50-90 °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.

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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