EASTMAN

Technical Data Sheet
Eastar™ Polyester EN052

Applications
- Commercial housewares
- Compounders
- Point-of-purchase

Product Description
Eastar™ 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) @ -40°C (-40°F)	 D 256 D 256	 51 J/m (1.0 ft·lbf/in.) 36 J/m (0.7 ft·lbf/in.)
Impact Strength, Unnotched @ 23°C (73°F) @ -40°C (-40°F)	 D 4812 D 4812	 NB NB
Deflection Temperature @ 0.455 MPa (66 psi) @ 1.82 MPa (264 psi)	 D 648 D 648	 66 °C (151 °F) 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)

[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 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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