

# Technical Data Sheet

## Eastar™ Copolyester 5011

### Applications

- Building materials
- Compounders
- Electronic packaging
- Jars-skin care pkg
- Large appliances non-food contact
- Non-kitchen appliances
- Packaging component films
- Packaging components non food contact
- Personal care & cosmetics packaging
- Personal care bottles
- Personal care packaging
- Sporting equipment
- Strapping
- Transaction cards
- Window housings
- Windows

### Product Description

Eastar™ Copolyester 5011 is a glycol modified polyethylene terephthalate(PET). The modification is made by adding a second glycol, cyclohexanedimethanol (CHDM) during the polymerization stages. The second glycol is added in the proper proportion to produce an amorphous polymer.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.

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### Typical Properties

Property <sup>a</sup>	Test Method <sup>b</sup>	Typical Value, Units <sup>c</sup>
<b>General Properties</b>		
Specific Gravity	D 792	1.28
Mold Shrinkage		
Parallel to Flow, 3.2-mm (0.125-	D 955	0.002 mm/mm (0.002 in./in.)
in.) thickness		
Parallel to Flow, 1.6-mm		0.005 mm/mm (0.005 in./in.)
(0.0625-in.) thickness		
Water Absorption, 24 h immersion	D 570	.13 %
<b>Mechanical Properties</b>		
Tensile Strength @ Break	D 638	25 MPa (3600 psi)
Elongation @ Break	D 638	30 %
Flexural Strength	D 790	75 MPa (10900 psi)
Flexural Modulus	D 790	2200 MPa (3.2 x 10 <sup>5</sup> psi)
Rockwell Hardness, R Scale	D 785	106

Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	69 J/m (1.3 ft·lbf/in.)
@ -40°C (-40°F)	D 256	28 J/m (.5 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB J/m (NB ft·lbf/in.)
@ -40°C (-40°F)	D 4812	2600 J/m (50 ft·lbf/in.)
<b>Optical Properties</b>		
Haze	D 1003	.3 %
Total Transmittance	D 1003	90 %
<b>Thermal Properties</b>		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	67 °C (152 °F)
@ 1.82 MPa (264 psi)	D 648	62 °C (143 °F)
<b>Typical Processing Conditions</b>		
Drying Temperature		71 °C (160 °F)
Drying Time		4-6 hrs
Processing Melt Temperature		249-271 °C (480-520 °F)
Mold Temperature		16-38 °C (60-100 °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.

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