EASTMAN

Technical Data Sheet
Drystar™ 0603 Copolyester

Application/Uses

- Extrusion
- Extrusion blow molding
- Injection molding

Product Description

Eastman is pleased to announce the launch of DRYSTAR* copolyesters. This new product-line is designed to meet the needs of converters seeking value-added solutions to their drying requirements of copolyesters. Eastmans copolyesters are highly valued for their excellent balance of properties such as superior aesthetics, impact strength, and chemical resistance. These properties can be optimally realized when the resins are properly dehydrated in accordance to recommended drying conditions and equipment.

Recognizing this value, Eastman conceived Drystar™ copolyesters to allow converters with limited access to desiccant dryers to achieve these optimizations. In addition, some converters with desiccant dryers may still find Drystar™ copolyesters value-adding to attain production flexibility and cost saving by removing the drying process prior to injection molding, profile extruding, or extrusion blow molding copolyesters. The initial launch comprises of the commercialization of four grades of Drystar™ copolyesters and Eastman has on-going program to extend this strategic product-line in the future.

*DRYSTAR is only available in the Asia Pacific Region.

Typical Properties

Property[a]	Test[b] Method	Typical Value, Units[c]
General Properties		
Specific Gravity	D 792	1.27
Mold Shrinkage Parallel to Flow, 3.2-mm (0.125-in.) thickness	D 955	0.002-0.005 mm/mm (0.002-0.005 in./in.)
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	70°C (158°F)
@ 1.82 MPa (264 psi)	D 648	62°C (143°F)
Thermal Properties (ISO Method)		
Deflection Temperature		
@ 0.455 MPa (66 psi)	ISO 75	70°C
@ 1.82 MPa (264 psi)	ISO 75	62°C
Mechanical Properties		
Tensile Stress @ Break	D 638	30 MPa (4300 psi)
Tensile Stress @ Yield	D 638	50 MPa (7200 psi)
Elongation @ Break	D 638	180%
Elongation @ Yield	D 638	4.4%
Tensile Modulus	D 638	2030 MPa (2.9 x 10^5 psi)
Flexural Strength	D 790	68 MPa (9800 psi)
Flexural Modulus	D 790	2060 MPa (3.0 x 10^5 psi)
Rockwell Hardness, R Scale	D 785	108
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	105 J/m (1.9 ft·lbf/in.)
@ -40°C (-40°F)	D 256	40 J/m (0.7 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB
Mechanical Properties (ISO Method)		
Tensile Strength @ Yield	ISO 527	48 MPa
Tensile Strength @ Break	ISO 527	29 MPa
Elongation @ Yield	ISO 527	4%
Elongation @ Break	ISO 527	200%
Tensile Modulus	ISO 527	2000 MPa
Flexural Modulus	ISO 178	2100 MPa
Flexural Strength	ISO 178	67 MPa

Izod Impact Strength, Notched		
@ 23°C	ISO 180	9.4 kJ/m2
@ -40°C	ISO 180	4.4 kJ/m2

Optical Properties		
Haze	D 1003	0.2%
Total Transmittance	D 1003	90%

Typical Processing Conditions	
Drying Temperature [d]	71°C (160°F)
Drying Time [d]	6 hrs
Processing Melt Temperature	249-271°C (480-520°F)
Mold Temperature	16-38°C (60-100°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.*
[d] *Drying is only recommended for products previously opened and exposed to humid conditions.*

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.

07-Sep-2006 10:40:10 AM