

Technical Data Sheet

Estar™ DG021 Glass Filled Polyester

Key Attributes

- Contact clarity
- Ease of processing
- Excellent hydrolytic stability
- Good chemical resistance
- Good heat resistance
- Good toughness
- Increased modulus or stiffness

Product Description

Estar™ copolyester DG021 is a glass-reinforced amorphous copolyester that provides increased modulus and strength versus unreinforced versions. Eastar™ copolyester DG021 contains 20% glass fiber as well as a mold release agent derived from vegetable based sources. Its most outstanding features are excellent chemical resistance, toughness, heat resistance, contact clarity, ease of processing, hydrolytic stability, and increased modulus or stiffness. These features give molded products improved modulus and strength in applications that are exposed to certain chemicals, aggressive cleaners, and disinfectants. Contact clarity is also advantageous for secondary operations such as laser welding.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
General Properties		
% Glass Fiber		20
Specific Gravity	D 792	1.37
Mold Shrinkage	D 955	0.001 mm/mm
Mechanical Properties		
Tensile Stress @ Yield	D 638	100 MPa
Tensile Stress @ Break	D 638	96 MPa
Elongation @ Yield	D 638	3 %
Elongation @ Break	D 638	4 %
Tensile Modulus	D 638	5486 MPa
Flexural Modulus	D 790	5360 MPa
Flexural Yield Strength	D 790	141 MPa
Rockwell Hardness, R Scale	D 785	115
Izod Impact Strength, Notched @ 23°C	D 256	97 J/m
Impact Strength, Unnotched @ 23°C	D 4812	946 J/m
Optical Properties		
Total Transmittance	D 1003	80 %
Haze	D 1003	72 %
Thermal Properties		
Deflection Temperature @ 0.455 MPa	D 648	81 °C
@ 1.82 MPa	D 648	77 °C
Typical Processing Conditions		
Drying Temperature		71 °C (160 °F)
Drying Time		6 hrs

Processing Melt Temperature	259-271 °C (498-520 °F)
Mold Temperature	26-38 °C (79-100 °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 based on limited testing. Eastman makes no representation that the material in any particular shipment will conform to the values given.

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