EASTMAN

Product Data Sheet

DX Copolyester

Product Description

Copolyester is a higher heat polymer than Eastar copolyester 6763, used for rigid medical packaging applications only. Plastic sheet and film can be purchased through Tru-Tain (an Eastman extrusion customer).

Requests for DX should be directed to Kevin Truax, owner of Tru-Tain

Typical Properties (Preliminary)

Property[a]	Test Method[b]	Typical Value, Units[c]
Injection Molded Properties		
Specific Gravity	D792	1.23
Water Absorption, 24 h immersion	D570	0.14%
Mold Shrinkage [d]	D955	-0.0036 mm/mm (-0.0036 in./in)
Deflection Tempature		
@ 0.455 MPa (66 psi)	D648	72°C (162°F)
@ 1.82 MPa (264 psi)	D648	66°C (151°F)
Vicat Softening Tempature	D1525	87°C (189°F)
Tensile Stress @ Yield	D638	46 MPa (6700 psi)
Tensile Stress @ Break	D638	44 MPa (6400 psi)
Elongation @ Yield	D638	5%
Elongation @ Break	D638	270%
Flexural Strength	D790	66 Mpa (9600 psi)
Flexural Modulus	D790	1900 MPa (2.8 x 10^5 psi)
Rockwell Hardness, R Scale	D785	108
Izod Impact Strength, Notched		
@ 23°C (73oF)	D256	NB
@ -40°C (-40oF)	D256	67 J/m (1.3 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73oF)	D4812	NB
@-40°C (-40oF)	D4812	NB

Color [e]		
L*	D2244	95.83
a*	D2244	-0.11
b*	D2244	0.3
Total Transmittance	D1003	93%
Haze [d]	D1003	0.6%
Film Properties		
Thinkness of Film Tested		0.01 in.
Inherent Viscosity [f]	EMN-A-AC-G-V-1	0.71
Gladd Transition Tempature (T_g) [g]	DSC	87°C (189°F)
Tensile Strength @ Yeild M.D.	D882	44 MPa (6400 psi)
Tensile Strength @ Break M.D.	D882	66 MPa (9600 psi)
Elongation @ Yeild M.D.	D882	4%
Tensile Strength @ Break [d] M.D.	D882	250%
Tensile Modulus, 1% Secant M.D.	D882	1600 MPa (2.4×10^5 psi)
Tensile Modulus, Tangent M.D.	D882	1700 MPa (2.5×10^5 psi)
Dart Impact	D1709A	466 g
Impact Resistance (Puncture), Energy @ Max. Load	D3763	3.3 J (2.4 ft·lbf)
Color		
L*	D2244	96.25
a*	D2244	0.01
b*	D2244	0.3
Gloss @ 45°	D2457	106
Transparency	D1746	100%
Regular Transmittance	D1003	90%
Total Transmittance	D1003	93%
Haze [d]	D1003	0.96%

[a] *Unless noted otherwise, all tests are run at 23oC (73oF) and 50% relative humidity*

[b] *Unless noted otherwise, the test method is ASTM*

[c] *Units are in SI or US customary units*

[d] *Coefficient of variance >10%*

[e] *Transmitted, molded plaque*

[f] *10-mil film, in PM 95*

[g] *2nd heating cycle*

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.

Eastman Medical Disclaimer

It is the responsibility of the medical device manufacturer ("Manufacturer") to determine the suitability of all component parts and raw materials, including any Eastman product, used in its final product in order to ensure safety and compliance with requirements of the United States Food and Drug Administration (FDA) or other international regulatory agencies.

Eastman Chemical Company products have not been designed for nor are they promoted for end used that would be categorized by either the United States FDA or by the International Standards Organizations (ISO) as implant devices. Eastman products are not intended for use in the following applications: (1) in any bodily implant applications for greater than 30 days, based on FDA-Modified ISO-10993, Part 1 "Biological Evaluation of Medical Devices" tests (including any cosmetic, reconstructive or reproductive implant applications); (2) in any cardiac prosthetic device application, regardless of the length of time involved, including, without limitation, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass assisted devices, or (3) as any critical component in any medical device that supports or sustains human life.

Eastman Chemical Company products offered for the medical marker have met selected FDA-Modified ISO-10993m Part 1 "Biological Evaluation of Medical Devices" tests with human tissue contact time of 30 days or less. The tests include: cytotoxicity, sensitization, irritation or intracutaneous reactivity, systemic toxicity (acute), subchronic toxicity (sub-acute), implantation, hemocompatibility. The Manufacturer is responsible for the biological evaluation of the finished medical device.

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