Product Data Sheet

Eastman Provista™ Copolymer MP001

Application/Uses

- Medical
- Tubing

Product Description

Eastman Provista™ Copolymer MP001 is a resin specifically developed for extrusion into profiles where aesthetics such as high clarity and gloss, coupled with design flexibility, drive demand. Compared to commonly used materials, Eastman Provista™ copolymer runs on most standard processing equipment at increased speeds. An extremely high melt strength makes the resin an excellent choice when extruding profiles into complicated shapes. In addition to profile extrusion, Eastman Provista™ copolymer is an excellent choice for extrusion of rigid tubing. This product meets the biocompatibility requirements under FDA/ISO 10993 and USP Class 6, Plastics.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.
The GREENGUARD INDOOR AIR QUALITY CERTIFIED® Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute (GEI). GEI is an industry-independent, non-profit organization that oversees the GREENGUARD Certification Program. The GREENGUARD Certification Program is an industry independent, third-party testing program for low-emitting products and materials for indoor environments. For more information about GEI and to obtain printable certificates for Eastman™ Copolyesters, visit www.greenguard.org. Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.

Typical Properties (Preliminary)

Property[a]	Test[b] Method	Typical Value, Units[c]
General Properties		
Density	D 792	1.27 g/cm^3
Mechanical Properties		
Tensile Stress @ Yield	D 638	50 MPa (7300 psi)
Tensile Stress @ Break	D 638	29 MPa (4200 psi)
Elongation @ Yield	D 638	4%
Elongation @ Break	D 638	109%
Flexural Modulus	D 790	2200 MPa (3.2 x 10^5 psi)
Flexural Strength	D 790	72 MPa (10400 psi)
Rockwell Hardness, R Scale	D 785	106

Izod Impact Strength, Notched [d]		
@ 23°C (73°F)	D 256	94 (9C/1NB) J/m (1.8 (9C/1NB) ft·lbf/in.)
@ -40°C (-40°F)	D 256	52C J/m (1.0C ft·lbf/in.)
Impact Strength, Unnotched [e]		
@ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB
Impact Resistance (Puncture), Energy @ Max. Load [f]		
@ 23°C (73°F)	D 3763	33 J (24 ft·lbf)
@ 0°C (32°F)	D 3763	37 J (27 ft·lbf)
@ -40°C (-40°F)	D 3763	41 J (30 ft·lbf)
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	67°C (153°F)
@ 1.82 MPa (264 psi)	D 648	62°C (144°F)
Vicat Softening Temperature @ 1 kg load	D 1525	79°C (174°F)
Optical Properties		
Haze	D 1003	0.6%
Regular Transmittance	D 1003	88%
Total Transmittance	D 1003	90%
Gloss @ 60°	D 2457	171
Color, b* CIELAB, Illuminant D6500, 10° Observer	D 2244	0.61

[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] *Testing conducted using 10 standard flex bars with 20 mil notch; C = complete break; NB = nonbreak.*

[e] *Nonbreak as defined by ASTM D 4812.*

[f] *Testing conducted using 10 standard 4" x 4" x 0.125" thick injection molded plaques; 100% ductile break.*

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 uses that would be categorized by either the United States FDA or by the International Standards Organization (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 market have met selected FDA-Modified ISO-10993, 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.

The suitability of an Eastman Product in a given end-use environment is dependent upon various conditions including, without limitation, chemical compatibility, temperature, part design, sterilization method, residual stresses, and external loads. It is the responsibility of the Manufacturer to evaluate its final product under actual end-use requirements and to adequately advise and warn purchasers and users thereof.

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