



Technical Data Sheet Eastman Provista™ Copolyester

Application/Uses

- Candy packaging
- Displays, Fixtures and Point of purchase
- Food packaging
- Furniture quards
- Plastics for hygiene feminine products
- Pricing channels
- Teething rails
- Tubing

Key Attributes

- Ease of processing
- Excellent chemical resistance
- Meets FDA regulations for food contact
- Sparkling clarity and high gloss
- Toughness with flexibility

Product Description

Eastman Provista[™] copolymer is a resin specifically developed for extrusion into profiles where aesthetics like high clarity and gloss, coupled with design flexibility drive demand. Compared to commonly used materials, Eastman Provista[™] copolyester can often run 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. This product is certified to ANSI/NSF Standard 51.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED

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This product has been CRADLE TO CRADLE CERTIFIED^{cm} Silver.

The CRADLE TO CRADLE CERTIFIED Mark is a registered certification mark used under license through McDonough Braungart Design Chemistry (MBDC). MBDC is a global sustainability consulting and product certification firm. The CRADLE TO CRADLE framework moves beyond the traditional goal of reducing the negative impacts of commerce ('eco-efficiency'), to a new paradigm of increasing its positive impacts ('eco-effectiveness'). At its core, Cradle to Cradle design perceives the safe and productive processes of nature's 'biological metabolism' as a model for developing a 'technical metabolism' flow of industrial materials. Product components can be designed for continuous recovery and reutilization as biological and technical nutrients within these metabolisms. For more information about MBDC and to obtain printable certificates for Eastman Copolyesters, visit www.mbdc.com. Choose Eastman Chemical Company under Company Name in C2C Certified products to display a list of our products.

Typical Properties

Property ^a	Test ^b Method	Typical Value, Units ^c
	Tietilou	

General Properties General Properties

Mechanical Properties Tensile Stress @ Yield D 638 50 MPa (7300 psi) Tensile Stress @ Break D 638 28 MPa (4100 psi) Elongation @ Yield D 638 4% Elongation @ Break D 638 110% Flexural Modulus D 790 2100 MPa (3.0 x 105 psi x 105 psi x 105 psi x) Flexural Strength D 790 68 MPa (9900 psi) Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched @ 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched @ 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Specific Gravity	D 792	1.27
Tensile Stress @ Yield D 638 50 MPa (7300 psi) Tensile Stress @ Break D 638 28 MPa (4100 psi) Elongation @ Yield D 638 4% Elongation @ Break D 638 110% Flexural Modulus D 790 2100 MPa (3.0 x 105 psi x 105 psi x 105 psi x 105 psi) Flexural Strength D 790 68 MPa (9900 psi) Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched 0 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched 0 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load 0 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties			
Tensile Stress @ Break D 638 28 MPa (4100 psi) Elongation @ Yield D 638 4% Elongation @ Break D 638 110% Flexural Modulus D 790 2100 MPa (3.0 x 105 psi x 105 psi) Flexural Strength D 790 68 MPa (9900 psi) Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched @ 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched @ 23°C (73°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Mechanical PropertiesMechanical Propert	ies	
Elongation @ Yield D 638 4% Elongation @ Break D 638 110% Flexural Modulus D 790 2100 MPa (3.0 x 105 psi x 105 psi) Flexural Strength D 790 68 MPa (9900 psi) Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched @ 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched @ 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Tensile Stress @ Yield	D 638	50 MPa (7300 psi)
Elongation @ Break D 638 110% Flexural Modulus D 790 2100 MPa (3.0 x 105 psi x 105 psi x 105 psi x 105 psi) Flexural Strength D 790 68 MPa (9900 psi) Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched 0 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched 0 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load 36 J (27 ft·lbf) @ -3°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Tensile Stress @ Break	D 638	28 MPa (4100 psi)
Flexural Modulus D 790 2100 MPa (3.0 x 10 ⁵ psi x 10 ⁵ psi x 10 ⁵ psi x 10 ⁵ psi) Flexural Strength D 790 Rockwell Hardness, R Scale D 785 D 286 D 785 D 296 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf)	Elongation @ Yield	D 638	4%
Thermal Properties 105 psi 105	Elongation @ Break	D 638	110%
Flexural Strength D 790 68 MPa (9900 psi) Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched 0 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched 0 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load 0 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Flexural Modulus	D 790	2100 MPa (3.0 x 10 ⁵ psi x
Rockwell Hardness, R Scale D 785 108 Izod Impact Strength, Notched			10 ⁵ psi)
Izod Impact Strength, Notched @ 23°C (73°F)	Flexural Strength	D 790	68 MPa (9900 psi)
@ 23°C (73°F) D 256 94 J/m (1.8 ft·lbf/in.) @ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched B 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load B 3763 B J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Rockwell Hardness, R Scale	D 785	108
@ -40°C (-40°F) D 256 53 J/m (1.0 ft·lbf/in.) Impact Strength, Unnotched @ 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf)	Izod Impact Strength, Notched		
Impact Strength, Unnotched @ 23°C (73°F)	@ 23°C (73°F)	D 256	94 J/m (1.8 ft·lbf/in.)
@ 23°C (73°F) D 4812 NB @ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	@ -40°C (-40°F)	D 256	53 J/m (1.0 ft·lbf/in.)
@ -40°C (-40°F) D 4812 NB Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	Impact Strength, Unnotched		
Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F) D 3763 36 J (27 ft·lbf) @ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal PropertiesThermal Properties	@ 23°C (73°F)	D 4812	NB
(a) 23°C (73°F) (b) 23°C (73°F) (c) 23°C (73°F) (e) -40°C (-40°F) (e) D 3763 (e) 36 J (27 ft·lbf) (e) 3763 (f) 36 J (27 ft·lbf) (e) 3763 (f) 36 J (27 ft·lbf) (e) 40°C (-40°F) (f) D 3763 (f) 36 J (27 ft·lbf) (f) 40°C (-40°F) (f)	@ -40°C (-40°F)	D 4812	NB
@ -40°C (-40°F) D 3763 35 J (26 ft·lbf) Thermal Properties	Impact Resistance (Puncture), Energy @ Max.	Load	
Thermal Properties	@ 23°C (73°F)	D 3763	36 J (27 ft·lbf)
	@ -40°C (-40°F)	D 3763	35 J (26 ft·lbf)
	Thermal PropertiesThermal Properties		
Deflection Temperature	Deflection Temperature		
@ 0.455 MPa (66 psi) D 648 70°C (158°F)	•	D 648	70°C (158°F)
@ 1.82 MPa (264 psi) D 648 62°C (143°F)		D 648	62°C (143°F)
Vicat Softening Temperature @ 1 kg load D 1525 83°C (181°F)	Vicat Softening Temperature @ 1 kg load	D 1525	83°C (181°F)
Optical PropertiesOptical Properties	Optical PropertiesOptical Properties		
Haze D 1003 0.6%		D 1003	0.6%
Regular Transmittance D 1003 87%	Regular Transmittance	D 1003	87%
Total Transmittance D 1003 90%	Total Transmittance	D 1003	90%
Gloss @ 60° D 2457 152	Gloss @ 60°	D 2457	152
Typical Processing ConditionsTypical Processing Conditions	Typical Processing ConditionsTypical Proc	cessing Condi	tions
Drying Temperature 71°C (160°F)			
Drying Time 6 hrs	Drying Time		
Processing Melt Temperature 249-271°C (480-520°F)			249-271°C (480-520°F)
Mold Temperature 16-38°C (60-100°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.

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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