

Eastman Eastar A150 Copolyester, Film

Category : Polymer , Film , Thermoplastic , Polyester, TP

Material Notes:

Eastar A150 Copolyester is a poly(1,4-cyclohexylene-dimethylene terephthalate/isophthalate). It is produced by reacting terephthalic acid and isophthalic acid with the glycol 1,4-cyclohexanedimethanol. Eastar A150 is intended primarily for extrusion into film and sheeting for packaging applications. It has excellent hydrolytic stability and good heat stability. Eastar A150 copolyester is lawful for use in food contact applications under food additive regulations published at 21 CFR 177.1240 by the Federal Food and Drug Administration.

Therefore, it is lawful for use as a packaging material for meat or poultry foods prepared under federal inspection of the U.S. Department of Agriculture regulations at 9 CFR 318.7 and 381.147. Applications/Uses Blister Packaging Food Packaging Food-contact applications Rigid

Medical

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-Eastar-A150-Copolyester-Film.php

Physical Properties	Metric	English	Comments
Bulk Density	0.670 g/cc	0.0242 lb/in ³	Poured; ASTM D1895
	0.730 g/cc	0.0264 lb/in ³	Vibrated; ASTM D1895
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D1505
Water Vapor Transmission	5.00 g/m ² /day	0.322 g/100 in ² /day	ASTM F372
Oxygen Transmission	13.0 cc-mm/m ² -24hr-atm	33.0 cc-mil/100 in ² -24hr-atm	ASTM D3985
Carbon Dioxide Transmission	59.0 cc-mm/m ² -24hr-atm	150 cc-mil/100 in ² -24hr-atm	ASTM D1434
Viscosity Measurement	0.73	0.73	Inherent, Film; EMN-A-AC-G-V-1
	0.77	0.77	Inherent; EMN-A-AC-G-V-1
Thickness	280 microns	11.0 mil	ASTM D374

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	43.0 MPa	6240 psi	ASTM D882
Film Tensile Strength at Yield, TD	43.0 MPa	6240 psi	ASTM D882
Film Elongation at Break, MD	250 %	250 %	ASTM D882
Film Elongation at Break, TD	250 %	250 %	ASTM D882
Film Elongation at Yield, MD	5.0 %	5.0 %	ASTM D882
Film Elongation at Yield, TD	5.0 %	5.0 %	ASTM D882

Tensile Modulus Mechanical Properties	1.60 GPa Metric	232 ksi English	TD: ASTM D882 Comments
	1.60 GPa	232 ksi	MD; ASTM D882
Coefficient of Friction	0.60	0.60	ASTM D1894
Tear Strength, Total	5.00 N	1.12 lb (f)	Split Tear Method, 254mm/min, TD; ASTM D1938
	5.30 N	1.19 lb (f)	Split Tear Method, 254mm/min, MD; ASTM D1938
Elmendorf Tear Strength, MD	5.71 g/micron	145 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	6.08 g/micron	154 g/mil	ASTM D1922
Dart Drop	2.43 g/micron	61.7 g/mil	23°C; ASTM D1709
	2.53 g/micron	64.3 g/mil	at -30°C; ASTM D1709
	2.68 g/micron	68.1 g/mil	at -18°C; ASTM D1709
Film Tensile Strength at Break, MD	56.0 MPa	8120 psi	ASTM D882
Film Tensile Strength at Break, TD	56.0 MPa	8120 psi	ASTM D882

Thermal Properties	Metric	English	Comments
Heat of Fusion	32.0 J/g	13.8 BTU/lb	ASTM E793
Specific Heat Capacity	1.20 J/g-°C	0.287 BTU/lb-°F	DSC
	1.40 J/g-°C	0.335 BTU/lb-°F	DSC
	@Temperature 80.0 °C	@Temperature 176 °F	
	1.70 J/g-°C	0.406 BTU/lb-°F	DSC
	@Temperature 100 °C	@Temperature 212 °F	
	1.90 J/g-°C	0.454 BTU/lb-°F	DSC
	@Temperature 200 °C	@Temperature 392 °F	
	2.20 J/g-°C	0.526 BTU/lb-°F	DSC
	@Temperature 280 °C	@Temperature 536 °F	
Melting Point	261 °C	502 °F	Crystalline Peak Melting Point; ASTM D3418
Glass Transition Temp, Tg	91.0 °C	196 °F	ASTM D3418

Optical Properties	Metric	English	Comments
Haze	0.50 %	0.50 %	ASTM D1003

<small>Class</small> Optical Properties	<small>108 %</small> Metric	<small>108 %</small> English	<small>at 45° ASTM D2457</small> Comments
Transmission, Visible	85 %	85 %	Transparency; ASTM D1746
	90 %	90 %	Regular Transmittance; ASTM D1003
	93 %	93 %	Total Transmittance; ASTM D1003

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