

DuPont Teijin Films Mylar® A Polyester Film, 92 Gauge

Category : Polymer , Film , Thermoplastic , Polyester, TP , Polyester Film

Material Notes:

Mylar® A films are tough, general purpose films that are transparent in 48 through 92 gauge and translucent in heavier gauges. They have a rough surface to provide ease of handling, good adhesion, and processability. Mylar® A films have balanced tensile properties and excellent resistance to moisture and most chemicals. They can withstand temperature extremes from -100°F to 300°F. Mylar® does not become brittle with age under normal conditions, because it contains no plasticizers. Typical Applications: Apparel stays Book jackets Carbon ribbon Control Tape Drumheads Duct Liners Identifications Membrane touch switches Metallized Base Pressure Sensitive Labels (plain or metallized) Protective surfacing Release liners Roll leaf (hot stamping) Spirit Masters Approvals: FDA Food Contact Status - All gauges of Mylar® A comply with the Food and Drug Administration regulation 21 CFR 177.1630 -- Polyethylene phthalate polymers. This regulation describes films which may be safely used in contact with all types of food excluding alcoholic beverages. Uncoated films such as Mylar® A can be used to contain foods during oven cooking or oven baking at temperatures above 250 °F. UL 94 VTM-2 - for 92-1400 gauge (0.023 - 0.35mm). UL Recognition - for 92-500 gauge (0.023-0.13mm) HWI=5, HAI=4, CTI=1; for 700-1400 gauge (0.18-0.35mm) HWI=4, HAI=0, CTI=1 Information provided by DuPont.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Teijin-Films-Mylar-A-Polyester-Film-92-Gauge.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in ³	ASTM D1505
Viscosity Measurement	0.56	0.56	ASTM D2857

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	103 MPa @Strain 5.00 %	15000 psi @Strain 5.00 %	ASTM D882
Film Tensile Strength at Yield, TD	96.5 MPa @Strain 5.00 %	14000 psi @Strain 5.00 %	ASTM D882
Film Elongation at Break, MD	110 %	110 %	ASTM D882A
Film Elongation at Break, TD	90 %	90 %	ASTM D882A
Tensile Modulus	3.50 GPa	507 ksi	ASTM D822
Poissons Ratio	0.38	0.38	Typical Mylar® before yield
	0.58	0.58	Typical Mylar® after yield
Film Tensile Strength at Break, MD	193 MPa	28000 psi	ASTM D882A
Film Tensile Strength at Break, TD	234 MPa	34000 psi	ASTM D882A

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	9.44 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	92 Gauge; ASTM D696
	@Temperature 30.0 - 50.0 $^{\circ}\text{C}$	@Temperature 86.0 - 122 $^{\circ}\text{F}$	
Specific Heat Capacity	1.17 $\text{J}/\text{g}\cdot^{\circ}\text{C}$	0.280 $\text{BTU}/\text{lb}\cdot^{\circ}\text{F}$	
Thermal Conductivity	0.155 $\text{W}/\text{m}\cdot\text{K}$	1.07 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	(Mylar® 1000A)
	@Temperature 25.0 - 75.0 $^{\circ}\text{C}$	@Temperature 77.0 - 167 $^{\circ}\text{F}$	
Melting Point	254 $^{\circ}\text{C}$	489 $^{\circ}\text{F}$	DSC
Maximum Service Temperature, Air	149 $^{\circ}\text{C}$	300 $^{\circ}\text{F}$	
Maximum Service Temperature, Inert	-73.3 $^{\circ}\text{C}$	-100 $^{\circ}\text{F}$	
Shrinkage, MD	1.9 %	1.9 %	Unrestrained
	@Temperature 150 $^{\circ}\text{C}$, Time 1800 sec	@Temperature 302 $^{\circ}\text{F}$, Time 0.500 hour	
Shrinkage, TD	1.1 %	1.1 %	Unrestrained
	@Temperature 150 $^{\circ}\text{C}$, Time 1800 sec	@Temperature 302 $^{\circ}\text{F}$, Time 0.500 hour	

Optical Properties	Metric	English	Comments
Refractive Index	1.64 - 1.67	1.64 - 1.67	typical of Mylar®
Haze	16 %	16 %	ASTM D1003
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	400 - 600 V	400 - 600 V	
Hot Wire Ignition, HWI	≤ 7.0 sec	≤ 7.0 sec	
High Amp Arc Ignition, HAI	≤ 15 arcs	≤ 15 arcs	

Descriptive Properties	Value	Comments
Yield (nominal)	21500 in^2/lb	

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