

HellermannTyton

281 UV STABLE CLEAR POLYESTER

PRODUCT CONSTRUCTION:

Facestock: 1.0 mil (24 microns) clear polyester
 Adhesive: 0.7 mil (17 microns) permanent acrylic
 Liner: 2.3 mil (58 microns)



FEATURES

Protects underlying graphics from harsh environmental conditions.
 Provides a high gloss appearance to printed graphics
 Adhesive exhibits a high gloss appearance to printed graphics
 Adhesive provides good clarity and cold flow properties, resulting in good wet-out performance.
 UL Recognized under UL969 - UL File no. MH8212 & MH17205 Marking and Labeling System materials - Component.
 cUL-Recognized under UL969 - File no. MH8212 & MH17205 Marking and Labeling System Materials Certified for Canada - Component.
 RoHS/Regulation 2002/95/EU
 Facestock has high abrasion and scuff resistance, good weatherability and chemical resistance.
 Facestock is top-coated for thermal transfer printing.

APPLICATIONS

Barcode labels printed flexographically or by thermal transfer printer
 Rating plate labels for PV installations requiring high performance outdoor durability
 Property identification and asset labeling
 Durable goods labeling

PHYSICAL PROPERTIES

Service Temperature range: -40F to +302F (-40C to +150C)

Chemical	Performance
Strong acids	very good
Strong alkalis	very good
Grease, oil	Excellent
Organic solvent	Excellent
Water	Excellent



Humidity resistance Excellent: After 24 hours at 100 degrees F (38C) and 100% relative humidity. No change noted.

Adhesion: ASTM D 903 (Modified for 72 hour dwell time)

	Initial 15 Min. Dwell		72 Hours at Room Temp	
	oz./in.	N/100mm	oz./in.	N/100mm
Stainless Steel	23.1	(25.4)	68.5	(75.4)
Aluminum	35.26	(38.8)	45.9	(50.5)
Polypropylene	19.5	(21.5)	18.5	(20.4)
HDPE	15.3	16.8)	17.4	(19.1)
LDPE	12.7	14)	18.5	(20.4)
ABS Plastic	35	42.6)	39.7	(43.7)

Environmental Performance

	Adhesion to Stainless Steel		Visual Appearance	Edge Penetration
	oz./in.	N/100mm		
70% IPA	41.7	(45.9)	No Change	0
Tide Detergent	39.6	(43.6)	No Change	0.5
Engine Oil (10W30)	34.1	(37.5)	No Change	0
Water	40.2	(44.2)	No Change	0
Ammonia -pH 11	23.5	(25.9)	No Change	0
409 Cleaner	31.8	(35)	No Change	0.01
Toluene	9.6	(10.6)	No Change	6.4
Brake Fluid	32.8	(36.1)	No Change	0.3
Reference Fuel C	18.4	(20.2)	No Change	6.4
Kerosene K1	19.5	(21.5)	No Change	2.5
Heptane	12	(13.2)	No Change	0

Compliance UL - C-U using TT822OUT and TT822OUTSM

Substrates	Minimum Temp.		Maximum Temp.		I/O = Indoor/Outdoor
	F	C	F	C	
Polyester Labels	-40	-40	302	150	I/O
Vinyl Labels	-40	-40	140	60	I/O

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ENVIRONMENTAL PERFORMANCE

Outdoor Life: Outdoor aging is dependent on climate, the direction the label faces, the surface angle to which the label is applied (horizontal or vertical) and the amount of airborne pollutants to which the label is exposed. Initial life of 2 years, but is designed to last much longer in UV conditions. HellermannTyton makes no claim or warranty regarding outdoor durability in actual end user conditions.

All other exposures in the US 100% or 2 year outdoor durability

Any outdoor graphic exposed to solar energy more than half the daylight hours in Arizona, New Mexico and the desert areas of California, Nevada, Utah and Texas may see reduced outdoor durability.

SPECIAL CONSIDERATIONS

Minimum application temperature +50F (10C) for best bonding conditions, application surface should be at room temperature or slightly warmer. Labels reach full bond after 24 hours.

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