IDENTCO®

Technical Data Sheet

TT451

THERMAL TRANSFER SEMI-GLOSSY ANTI-STATIC WHITE POLYIMIDE FILM

GENERAL DESCRIPTION: TT451 is a topcoated semi-gloss white anti-static polyimide film. It is coated with an aggressive permanent acrylic adhesive and backed with a 50# Kraft release liner.

USES: Ideal for marking electronic components, and the top/bottom side of printed circuit boards. This material is designed to withstand high temperatures and harsh chemicals. Withstands through-hole and surface mount circuit board processes. Ideal material for industrial bar code applications requiring durability. This high-performance material is designed for applications requiring excellent solvent and scratch resistance. Excellent material for circuit board applications that require an ESD material.

FEATURES: Indoor only. Excellent scratch, abrasion, chemical, and heat resistant when printed with a thermal transfer resin-based ribbons. This film is dimensionally stable (no shrinkage), high-performance adhesive. Preheating of the material and ribbon will enhance the performance. This material has lower resistivities than TT401 and shorter static decay times. When the label is peeled from its release liner, less than 25 volts per square inch of electrostatic charge is generated, making it STATIC SAFE in accordance with EIA 625 and 541. TT451 meets MIL-STD- 202F, Notice 12, Method 215J.

RECOGNITION(S): UL-MH16873 RoHS Directive 2002/95/EC Compliant

RECOMMENDED RIBBON: Thermal Transfer Resin Ribbon

PHYSICAL PROPERTIES	**TEST METHODS**	**CONVENTIONAL UNITS**	**S.I. UNITS**
THICKNESS	Film	2.7 mils	68.6 microns
	Adhesive	2.0 mils	50.8 microns
	Liner (50#)	3.0 mils	76 microns
	Total	7.7 mils	195.4 microns
ADHESIVE PERFORMANCE	Stainless Steel		
	20 minute dwell	44 oz/in	480 N/m
	72 hour dwell	82 oz/in	900 N/m

WARRANTY

"Our products are sold with the understanding that the buyer will test them in actual use and determine for himself their adaptability to his intended uses. We warrant to the buyer that our products are free from defects in material and workmanship. This warranty is in lieu of any other warranty, expressed or implied"

SURFACE	TIME	SERVICE TEMPERATURES	
Aluminum Panel:	1-30 Minutes	572°F	300°C
	2-4 Minutes	617°F	325°C
	1-9 Seconds	842°F	450°C
	1-3 Seconds	1000°F	538°C

*****CUSTOMER TO TEST IN ACTUAL APPLICATION TO DETERMINE IF MATERIAL MEETS CUSTOMER REQUIREMENTS****

MINIMUM APPLICATION TEMPERATURE: 50°F 10°C

EXTERIOR DURABILITY Indoor Only

CHEMICAL RESISTANCES:
Samples subjected to 3 cycles of three minute immersions immediately followed by a toothbrush rub after each immersion.

CHEMICAL REAGENT:	RESULTS
1Part IPA, 3 Part Mineral Spirits	No visible effect
-1,1,1 - Trichlorethane	Solvent deleted per Notice 12
Terpene Defluxer	No visible effect
Saponifier	No visible effect

PROPERTIES	TEST METHOD
Chemical Resistance	MIL-STD-202F, Notice 12, Method 215J Meets this military spec with our TTRR-C, J and N

TEST ENVIRONMENT:	PCS	READ RATE	PCS AFTER ABRASION	READ RATE AFTER ABRASION
Control	99%	100%	99%	100%
230°C heat, 5 minutes	99%	100%	99%	100%
Kyzen Corp. Aquanox SSA 30% aqueous, 40-50°C, 10 minutes	100%	99%	100%	100%
RE-ENTRY KNI 2000 Terpene, 40-45°C, 10 minutes	98%	100%	98%	100%
Alpha Metals Inc. EC-7R Terpene, 40-45°C, 10 minutes	98%	100%	98%	100%
Alpha Metals Inc.2110 Saponifier, 6% aqueous, 65-70°C, 10 minutes	97%	100%	97%	100%
Isopropanol 99%, 82°C, 10 minutes	99%	100%	99%	100%
Deionized Water, 100°C, 10 minutes	99%	100%	99%	100%

STORAGE STABILITY: Product should be stored at 80°F (27°C) and 60% relative humidity to ensure optimal performance.

SHELF LIFE: 1 year @ proper storage conditions.

1018 Updated UL info