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OF ANY ARTICLE WITHOUT WRITTEN PERMISSION 01 ECNO50281: PRELIMINARY ISSUANCE 4/20/07 \tmw 8.00 INCH MAX OD .193±.005 -**-** .006±.002 -ADHESIVE SIDE 1.000±.010 $.807 \pm .008$ TEXT ON THIS SIDE FACING UP SEE NOTE 2 3.00 INCH 3.000±.010 -MIN CORE LABEL ROLL REFERENCE DATA NOTES: UNLESS OTHERWISE SPECIFIED 1. MATERIAL: 2 MIL MATTE CHROME POLYESTER TC **PREPRINTED** WITH 2 MIL CLEAR OVERLAMINATE. **ARTWORK** CHROME POLYESTER **OVERLAMINATE** 2. LABEL ROLL TO INCLUDE PREPRINTED LABELS AS PER ARTWORK FILE ID SYSTEMS INC. PART NUMBER 010-00000089. 3. PRINTER RIBBON: USE UL PURE RESIN RIBBON PART ADHESIVE NUMBER LIMAK SP-330 TO PRINT MANUFACTURING SPECIFIC INFORMATION.

4. LABEL SOLUTION SHALL BE A UL 969 MARKINGAND LABELING SYSTEM.

5. PACKAGE LABELS SUCH THAT THEY ARE NOT DAMAGED DURING SHIPPING & HANDLING. LABEL PACKAGING WITH ID SYSTEMS INC. P/N, REVISION AND QTY. OF LABELS PER ROLL.

			DRAWN	V. YAKHNICH	4/20/07		ID Systems, Inc.			
			CHECKED	TStrand	4/20/07	1 University Plaza, Hackensack, NJ 07601				
QTY	NEXT ASSY	USED ON	APPR.	TMW	4/20/07	TITLE:	Label, Unit ID/F	-CC		
	APPLICATIO	ON	APPR.				REGISTRATIO			
MATERI	AL					WIRELESS				
S	EE NOTE	S 1 & 4	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES			TRANSCEIVER ASSY				
				ANCES: IONAL± 1/64		SIZE DV	VG. NO.	REV		
FINISH	N/A	1	ANGUI TWO P	LAR: MACH± 1 E LACE DECIMAL PLACE DECIMAL	±.01	C	279-00000089	01		
	1477	`	DO N	IOT SCALE DRAW	/ING	SCALE: 4:1	FILENAME: 279-00000089_01.SLDDRW	SHEET 1 OF 1		

DETAIL A LABEL CONSTRUCTION SEE NOTE 1

PRINTED AT

MANUFACTURING SITE (USING SPECIFICED RIBBON)

SEE NOTE 3 REF ONLY

064-0007-03a

Facestock:

2 Mil Matte Chrome Polyester TC is a matte finished metallic film featuring excellent tear strength, heat resistance, dimensional stability, opacity and chemical resistance. Designed for printing with most solvent and some water-based flexographic inks. Suitable for thermal transfer printing applications with select thermal transfer ribbons. Specific testing required.

Caliper: 0.002 inches $\pm 10\%$

Tensile: MD 18,000 psi CD 18,000 psi

Adhesive:

Excellent, general purpose industrial grade clear adhesive. Features high initial tack, ultimate adhesion and low adhesive ooze.

Minimum Application Temperature: +25° F

Service Temperature Range: -40° F to 300° F (-40° C to 149° C)

Typical Performance Data:

Typical values, not for specification use (see attached Appendix 1 and 2).

Liner:

50# SCK is a bleached, super calendered paper stock with very good die-cutting and matrix stripping properties. Supplied with an Anti Block Coating on the backside of the liner to control adhesive and label transfer to the backside of the liner in finished, wound rolls. This liner should not be used in fanfolded label applications and is not recommended for back printability.

Basis Weight: 56.5# per ream ±10%

(24" X 36" 500 sheets)

Caliper: 0.0032 inches $\pm 10\%$

Tensile: MD 51# per inch width CD 23# per inch width

Tear: MD 56 grams per sheet CD 71 grams per sheet

Total Construction Caliper (approximate): 0.0061 inches ± 10%

Printing/Converting

The topcoat allows for printing by flexography without the need for specially formulated inks. However, testing is recommended prior to ink selection. This product can be die-cut and stripped at high speeds on standard web-fed presses. Sample labels in a variety of shapes have been dispensed and applied successfully with standard labeling systems.

Applications and Uses

This product is suitable for use in a wide range of durable labeling applications. This product is also UL recognized for indoor/outdoor service. See file #MH8212 and MH 17205 for specific details. Also recognized component of CSA (Canadian Standards Association).

Shelf Life

Unless specified otherwise in this document, one year when stored at 72°F at 50% RH

Statement of Practical Use

As with all pressure sensitive materials, this product should be tested thoroughly under end-use conditions to ensure it meets the requirements of the specific application.

Appendix 1:

Surface:

oz/in

N/100mm

oz/in

N/100mm

oz/in

N/100mm

Performance Data

2 Mil Matte Chrome Polyester TC

Spec# 11118

Note: The following technical data should be considered representative or typical only and should not be used for specification purposes.

Peel Adhesion: 180° and 90° peel test.

	(15		72 Hours at Room Temperature					
-			90° Peel		180° Peel 90° Pe			
Surface:	oz/in	N/100mm	oz/in	N/100mm	oz/in	N/100mm	oz/in	N/100mm
Stainless Steel	36.5	40.1	24	26.4	61.1	67.2	30.4	33.4
Aluminum	40.5	44.5	20.8	22.8	75.4	82.9	32	35.2
Enamel	32	35.2	19.2	21.1	30.4	33.4	25.6	28.2
Polypropylene	15	15.8	6.4	7	27.2	29.9	13.8	15.1
HDPE	17	18.7	9.6	10.6	22.2	24.5	17.3	19
LDPE	1.9	2.1	1.6	1.8	7.5	8.3	3.2	3.5
ABS	27.2	29.9	22.4	24.6	43.2	47.5	25.6	28.2
		1 1		1 1				
	' 							
		72 H	lours			96 Hours		
	 	72 H	lours			96 Hours		

Stainless Steel	75.6	82	54.4	59.8	48	52.8	
Aluminum	80.2	88.2	46.4	51	54.4	59.8	
Enamel	51.2	56.3	41.6	45.8	48	52.8	
Polypropylene	25.3	27.8	12.8	14.1	19.2	21.1	
HDPE	21.8	23.9	15.5	17.1	22.4	24.6	
LDPE	2.4	2.6	3.2	3.5	4.8	5.3	
ABS	20.8	22.9	17.6	19.4	32	35.2	
Epoxy Powder Coat Aluminum							

Liner Release:

90° removal of Liner from Facestock.

Loop Tack:

			Loc	pTack
Rate of Removal	Grams/2" Width		oz/in	N/100mm
400 inches/min.	80.16	Stainless Steel	32	35

Appendix 2:

Environmental Performance Data

2 Mil Matte Chrome Polyester TC/

Spec# 11118

Chemical Resistance: The performance results are based on 4 hour immersions at room temperature unless otherwise noted (gasoline is 1 hour). Samples were applied to stainless steel panels and conditioned for 24 hours before immersion and evaluated immediately upon removal. Adhesion measured at 180° peel.

	Adhesion to	Adhesion to Stainless Steel		Edge	
Chemical	oz/in	oz/in N/100mm		Penetration mm	
Isopropyl Alcohol	30.4	33.4	No Change	0.89	
Tide® Detergent	32.0	35.2	No Change	0.00	
Engine Oil (10W30)	41.6	45.8	No Change	0.00	
Water	38.4	42.2	No Change	0.00	
Ammonia			Not Recommended		
409® Cleaner	22.4	24.6	No Change	0.00	
Toluene	27.2	29.9	No Change	7.24	
Brake Fluid	36.0	39.6	No Change	2.16	
Gasoline	24.8	27.3	No Change	4.19	
Kerosene K1	32.6	41.4	No Change	1.65	
Heptane	30.4	33.4	No Change	2.03	

^{409®} is a registered trademark of the Clorox Company

Appendix 3:

Compliance Data

2 Mil Matte Chrome Polyester TC

Spec# 11118

UL - Underwriters Laboratories, Inc.

Tide® is a registered trademark of the Procter & Gamble Company

	Minimum 7	Temperature	Maximum 7	Indoor/Outdo or	
Substrates:	F°	Co	F°	Co	(I=Indoor only I/O=Indoor and Outdoor)
Aluminum	-40	-40	302	150	Yes
Stainless Steel	-40	-40	302	150	Yes
Galvanized Steel	-40	-40	302	150	Yes
Alkyd Enamel Painted Metal	-40	-40	212	100	Yes
Acrylic Painted Metal	-40	-40	302	150	Yes
Epoxy Paint	-40	-40	302	150	Yes
Polyester Paint	-40	-40	212	100	Yes
Nylon	-40	-40	212	100	Yes
Phenolic	-40	-40	212	100	
ABS Plastic	-40	-40	176	80	
Polypropylene Oxide	-40	-40	176	80	
Polycarbonate	-40	-40	176	80	Yes
Polystyrene	-20	-29	176	80	
Thermoset Polyester	-40	-40	212	100	

					_
Recognized Ribbons:					
	Armor "A	XR7+"			Yes
	Astro Med l	Inc "R-5"			Yes
	NCR "Pro	mark 3"			Yes
	Dai Nippon	"R-300"			Yes
	Iimak "Sl	P-330"			Yes
	Japan Pulp & Pa	per "Resin 1"			Yes
	Peak "Ultra l	Premium"			Yes
	Ricoh "XI	B110C"			Yes
	Sato Corp. "I	Premier 1"			Yes
	Sony "4072" "4	571" "5070"			Yes
	Union Chemica	ar "US-300"			Yes
	Zebra "5095	5" "5175"			Yes
	Ricoh "XB	110CR"			Yes
	_	•		•	
		•		•	

2 Mil Matte Chrome Polyester TC

Spec# 11118

CSA - Canadian Standards Association

	Minimum	Temperature	Maximum	Temperature	Indoor/Outdo or
Substrates:	F°	C°	F°	C°	(I=Indoor only I/O=Indoor and Outdoor)
Metals	-40	-40	302	150	Yes

Plastics Group I	-40	-40	212	100	Yes
Plastics Group II	-40	-40	176	80	Yes
Plastics Group III	-40	-40	176	80	Yes
Plastics Group V	-40	-40	176	80	Yes
Plastics Group VI	-40	-40	176	80	Yes
Plastics Group VII	-40	-40	176	80	Yes
Plastics Group VIII	-40	-40	176	80	Yes

		Thermal Printers				
Acceptable Ribbons:		TEC	Zebra	Datama x	(I=Indoor only I/O=Indoor and Outdoor)	
Zebra "5095"			Yes		Yes	
Sony "TR4070"	Yes		Yes	Yes	Yes	
Sony Signature Series Resin	Yes		Yes	Yes	Yes	
Iimak "SP-330"	Yes		Yes	Yes	Yes	
Japan Pulp & Paper "Resin 1"	Yes	Yes	Yes	Yes	Yes	
Ricoh "B110C"	Yes	Yes	Yes	Yes	Yes	
Sato Corp. "Premier 1"		Yes	Yes	Yes	Yes	
Sony "TR5070"	Yes	Yes	Yes	Yes	Yes	
Sony "TR4571"		Yes			Yes	

Spec# 11118

ıtdoor

The information on compliance conditions, substrates, and printing products contained in the tables above represent a summary of recognized or acceptable conditions and printing products. Other conditions, substrates, and printing products may be recognized with this material. Please consult the specific compliance organization records or specific files for a complete listing.

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