Rauland-Borg Corporation

Wireless Hospital Bed Interface

FCC ID#: UG2-301

Photo Four – External
FCC ID Label – Bed Unit

Thermal Transfer Polyester Label Material

7830

Technical Data **April 15, 1999**

Supersedes January 11, 1993

Construction

(Calipers are nominal values.)

Facestock	Adhesive	Liner
1.0 mil (25 micron)	0.8 mil (20 micron)	3.2 mil (81 micron)
Gloss white polyester	#400 Acrylic	55# Densified kraft

Features

- Facestock is topcoated for thermal transfer printing. Resin ribbons are recommended for optimum durability. The topcoat also provides improved ink anchorage for traditional forms of press printing.
- #400 adhesive offers excellent low temperature performance and peel adhesion to a wide variety of substrates. It has excellent long term aging that resists yellowing.
- 55# densified kraft liner assures consistent die cutting.
- 3M™ Label Material 7830 is UL recognized (File MH11410) and CSA accepted (File 99316). See the UL and CSA listings for details.

Application Ideas

- Barcode labels and rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.

Typical Physical Properties

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

Adhesion: 180° peel test procedure is ASTM D 3330.
90° peel test procedure is ASTM D 3330 modified for the angle change.

	Initial (10 Minute Dwell/RT)				Conditioned for 3 Days at Room Temperature 72°F (22°C)			
	180° Peel		90° Peel		180° Peel		90° Peel	
Surface	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	29	32	23	25	41	45	32	35
Polycarbonate	33	36	28	31	39	43	37	40
Polypropylene	27	30	19	21	29	32	26	28
Glass	32	35	24	26	40	44	40	44
HD Polyethylene	12	13	8	9	14	15	12	13
LD Polyethylene	11	12	9	10	14	15	17	19

	Conditioned for 3 Days at 120°F (49°C)				Conditioned for 24 hours at 90°F (32°C) at 90% Relative Humidity			
	180° Peel		90° Peel		180° Peel		90° Peel	
Surface	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	46	50	38	42	67	73	33	36
Polycarbonate	26	28	27	30	34	37	33	36
Polypropylene	32	35	25	27	28	31	21	23
Glass	50	55	38	42	47	51	26	28
HD Polyethylene	21	23	15	16	17	19	15	16
LD Polyethylene	5	5	7	8	10	11	17	19

Liner Release: 180° Removal of Liner from Facestock

Rate of Removal	Grams/Inch Width	N/100 mm
90 inches/minute	28	0.90
300 inches/minute	36	1.39

Environmental Performance

The properties defined are based on four hour immersions at room temperature (72°F/22°C) unless otherwise noted. Samples were applied to stainless steel panels 24 hours prior to immersion and were evaluated one hour after removal from the solution for peel adhesion. Adhesion measured at 180° peel angle (ASTM D 3330) at 12 inches/minute.

Chemical Resistance:

	Adhesion to Stainless Steel		Appearance	Edge Penetration
Chemical	Oz./in.	N/100 mm	Visual	Millimeters
Isopropyl Alcohol	39	43	No change	0
Detergent (1% Alconox®*)	42	46	No change	0
Engine Oil (10W30) @ 250°F (121°C)	53	58	No change	2
Water for 48 hours	62	68	No change	0
pH 4	43	47	No change	0
pH 10	44	48	No change	0
409®* Cleaning solution	45	49	No change	0
Toluene	23	25	No change	7
Acetone	28	31	No change	5
Brake Fluid	54	59	No change	0
Gasoline	24	26	No change	6
Diesel Fuel	39	43	No change	1.5
Mineral Spirits	34	37	No change	3
Hydraulic Fluid	43	47	No change	0

Temperature Resistance:

300°F (149°C) for 24 hours:	no significant visual change
-40°F (-40°C) for 3 days:	no significant visual change

Humidity Resistance:

24 hours at 100°F (38°C) and 100% relative humidity:	no significant change in appearance or adhesion

Accelerated Aging:

ASTM D 3611: 96 hours at 150°F (65°C) and 80% relative humidity

	Rate of Removal	Oz./In. Width	N/100 mm
180° Peel Adhesion from Stainless Steel	12 inches/minute	29	32

Shelf Life

Two years from date of manufacture of product when properly stored at 72°F (22°C) and 50% relative humidity.

Processing

Printing:
Facestock is topcoated for improved ink receptivity and is designed for thermal transfer printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing. Refer to the Graphic Ink Selection Guide or call 3M Customer Service at 1-800-223-7427 for additional information.

*Thermal transfer ink ribbons recommended for use with 7830:

Advent: 301 Black; 303 Black; 501 Black; 501 Red; 501 Blue; 501 Green

Armor: AXR-7; AXR-7+; AXR-600

Astromed™: R5

CP™: 5440 Red; 5640 Blue; 5940 Black

Dasco: DR-74; DR-84

Great Ribbon: SDR

ICS: ICS-CC-4099.1

Iimak™: SH-36; SP-330; PrimeMark

Intermec: 053258-2; 054048-4

Japan Pulp and Paper: P Resin 1; JP Resin 2 Blue; JP Resin 2 Red (suitable for indoor use only); JP Resin 2 Green (suitable for indoor use only)

Kurz™: K500; K501

Markem™: 716 (suitable for indoor use only)

Mid City Columbia™: CGL-80; CGL-80HE

NCR™: Matrix Resin; Matrix; PaceSetter; Promark II; Ultra V

Pelikan™: T016

Ricoh™: B110A; B110C; B110CX

Sato™: Premier 1

Sony™: 4070; 4072; 4075; 4085; 5070; Signature™ Series Resin; Signature™ Series Wax

UBI™: HR03; HR04

Zebra™: 5095; 5099; 5100; 5175

Die Cutting:
Rotary die cutting is recommended. Fanfolding of labels is not recommended. Small labels should be evaluated carefully. Winding tensions should be kept at a minimum to help prevent the adhesive from oozing.

Packaging:
Finished labels should be stored in plastic bags.

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Special Considerations

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.**

**NOTE: When using solvents, read and follow the manufacturer's precautions and directions for use.

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 50°F (10°C), can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

Technical Information and Data

The technical information and data, recommendations, and other statements provided are based on tests or experience which 3M believes to be reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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