Specification

Item defined by enclosed datasheet/below stated requirements:

Reference / Article no.: *7871*
Specification of article: *3M™ Thermal Transfer Polyester Label Materials 7871, 7872 and 7873 are gloss polyester label stocks that offer premium durability and moisture resistance. These label products utilize 3M™ Adhesive 350, which is a universal adhesive for label material that offers excellent chemical resistance and holding strength even at high temperatures.*

2.0 mil gloss white polyester facestock with 1.8 mil acrylic adhesive 350 on a 55 lb densified kraft liner

PRODUCT SELECTION GUIDE

Product		Construction: Facestock Color Print Method	Cal. (Mils)	Facestock Adhesive Type Liner	Typical Performance Characteristics	Specifications: UL/CSA	Specifications: RoHS	Pre-Slit Roll Available	Full Master Roll 2-Day Service
Polyester – Gloss White – Thermal Transfer									
"Go To" PETs	7816	Polyester Gloss White Flexo, TT	2.0 0.8 3.2	White Polyester Gloss TC 310 55# Densified Kraft	Excellent durability with a wide range of ribbons. 310 is a firm adhesive that resists oozing.	UL/CSA	RoHS	4.5" x 1668' & 6" x 1668'	✔
"Go To" PETs	7868	Polyester Gloss White Flexo, TT	2.0 1.1 3.2	White Polyester Gloss TC 350 55# Densified Kraft	350 adhesive for performance applications that require thermal transfer printing and demand adhesive performance on difficult-to-stick-to surfaces, such as smooth plastics or powder-coated paints.	UL/CSA	RoHS	4.5" x 1668' & 6" x 1668'	✔
"Go To" PETs	7871	Polyester Gloss White Flexo, TT	2.0 1.8 3.2	White Polyester Gloss TC 350 55# Densified Kraft	Heavy adhesive coat-weight for textured surfaces. Excellent high-temperature resistance.	UL/CSA	RoHS	4.5" x 1668' & 6" x 1668'	✔
	OFM03402	Polyester Gloss White Flexo, TT	2.0 0.9 3.2	White Polyester TC P1400 50# SC	P1400 is a tackified acrylic adhesive, with excellent adhesion to both high and low-surface-energy plastics.	UL	RoHS	4.5" x 1668' & 6" x 1668'	✔

Original manufacturer:

3M
Hannemanns Allé 53, 2300 København S, Danmark
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www.3m.com

Material: Accoding to Datasheet			Description: **3M White Label Material**				
Finish:			Weight (gram): N/A	Sheet: 1 of 6	Scale: 1:1	Format: A4	Approved by: FL
Supply Chain may use original manufacturer vendors only							
Measures above	Measures up to	Deviations	Recommended vendors: 200010	3shape Holmens Kanal 7, 4.sal DK-1060 København K	Group.no.: DB.Tape		Drawn by: ICH
-	-	± -					Date: 08-06-2018
-	-	± -					
-	-	± -					
-	-	± -					
-	-	± -					
-	-	± -	Non-defined tolerances for measures in datasheet as defined by manufacturer. Non-defined tolerances for measures on labels as defined by printer and print-file.				
				Protected by copyright © Symbols, IPR, Obligations, Terms and standard requirements as defined in 3Shape corporate standard no.10000001	Drawing.no.: 10001577		Revision.: -02

Thermal Transfer Polyester Label Material

7871

Technical Data **January 1, 1999**

Supersedes March 9, 1998

Construction

(Calipers are nominal values.)

Facestock	Adhesive	Liner
2.0 mil (51 micron)	1.8 mil (46 micron)	3.2 mil (81 micron)
Gloss radiant white polyester	#350 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.
- #350 adhesive is 3M's most universal adhesive for label materials. It can permanently bond to high surface energy (HSE) and low surface energy (LSE) plastics, textured and contoured surfaces, powder coatings, and slightly oily metals. It has excellent chemical resistance and holding strength even at high temperatures. Thick adhesive caliper provides for stronger bond on textured surface.
- 55# densified kraft liner assures consistent die cutting.
- 3M™ Label Material 7871 is UL recognized (File MH16411) and CSA accepted (File 99316). See the UL and CSA listings for details.
- UL listing includes approval for use on powder coated surfaces.
- 3M Label Material 7871 meets British Standard BS-5609.

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	88	96	63	69	96	105	75	82
Polycarbonate	90	98	65	71	94	103	69	76
Polypropylene	73	80	29	32	83	91	31	34
Glass	93	102	69	76	99	108	77	84
HD Polyethylene	54	59	27	30	58	63	32	35
LD Polyethylene	53	58	30	32	56	61	37	40
Smooth Powder Coating	85	93			89	97		
Finely Textured Powder Coating	49	54			52	57		

	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	108	118	96	105	99	108	81	89
Polycarbonate	66	72	34	37	77	84	59	64
Polypropylene	81	89	33	16	78	85	47	51
Glass	106	116	86	94	89	97	72	79
HD Polyethylene	56	61	32	35	50	55	38	42
LD Polyethylene	15	16	14	15	43	47	40	44
Smooth Powder Coating	93	102			88	96		
Finely Textured Powder Coating	56	61			50	55		

Liner Release: 180° Removal of Liner from Facestock

Rate of Removal	Grams/Inch Width	N/100 mm
90 inches/minute	16	0.62
300 inches/minute	22	0.85

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	88	96	No change	0.6
Detergent (1% Alconox®*)	92	101	No change	1.3
Engine Oil (10W30) @ 250°F (121°C)	102	112	No change	0.6
Water for 48 hours	67	73	No change	0.1
pH 4	88	96	No change	0.7
pH 10	83	91	No change	1.4
409®* Cleaning solution	92	101	No change	1.3
Toluene	50	55	No change	5.2
Acetone	59	65	No change	4.9
Brake Fluid	98	107	No change	0.1
Gasoline	56	61	No change	4.6
Diesel Fuel	93	102	No change	0.7
Mineral Spirits	80	88	No change	2.2
Hydraulic Fluid	96	105	No change	0

Temperature Resistance:

300°F (149°C) for 24 hours:	no significant visual change 0.4% MD shrinkage 0.6% CD shrinkage
-40°F (-40°C) for 10 days:	no significant visual change

Humidity Resistance:

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

Accelerated Aging:

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

	Rate of Removal	Grams/Inch Width	N/100 mm
180° Removal of Liner from Facestock	90 inches/minute	12	0.46
	Rate of Removal	**Oz./In. Width**	**N/100 mm**
180° Peel Adhesion from Stainless Steel	12 inches/minute	87	95

Shelf Life

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

Agency Listing Information

Thermal Transfer Printing
Printer: UL no longer requires evaluation and listing of specific printers.

*Ink Ribbon/UL Recognized Components

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: JP 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

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.

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.

3M™ Thermal Transfer Polyester Label Material
7871

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.

Warranty and Limited Remedy

The 3M product will be free from defects in material and manufacture for a period of one (1) year from the date of manufacture. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. If the 3M product is defective within the warranty period stated above, your exclusive remedy and 3M's sole obligation shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product.

Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including contract, warranty, negligence, or strict liability.

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