



Indoor UL Recognized Matte Silver Polyester Label Products

FM090 • FM092 • FM092R • FM095 • FM098 • FM099

Technical Data

February, 2007

Product Description 3M™ Indoor UL Recognized Matte Silver Polyester Label Products are durable, high performance materials that offer excellent thermal stability and moisture resistance. These polyester labels utilize 3M™ Adhesive P1212, which is a high clarity general purpose acrylic emulsion that exhibits good initial tack, excellent die cutting properties, minimal cold flow, and good UV resistance.

Construction	Product Number	Facestock	Adhesive	Liner
	3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM090	.002 in. Matte Silver Polyester TC	P1212 Perm. 18	60# SBK 3.4 mil stabilized clay coated two side kraft sheet
	3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM092	.002 in. Matte Silver Polyester TC	P1212 Perm. 18	50# SC 3.1 mil semi-bleached super calendered kraft sheet
	3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM092R	.002 in. Matte Silver Polyester TC	P1212 Perm. 18	50# SC Remoist 3.1 mil semi-bleached super calendered kraft sheet
	3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM095	.002 in. Matte Silver Polyester TC	P1212 Perm. 18	90# Polycyd. 7.0 mil bleached kraft sheet polyethylene coated on two sides
	3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM098	.002 in. Matte Silver Polyester TC	P1212 Perm. 18	44# Poly/Kraft 3.1 mil liner where polypropylene has been laminated to a 44# brown kraft sheet
	3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM099	.002 in. Matte Silver Polyester TC	P1212 Perm. 18	.0015 in. Clear Polyester Liner

(Calipers are nominal values)

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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 properties determined per TLMI Method using 1.0 mil polyester with 0.9 mil of adhesive on a polished stainless steel panel.

Peel Adhesion	3.0 lbs./in. (616 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
Loop Tack	1.8 lbs./in. (316 N/m)	TLMI Method, 12"/min., 1" wide sample
Shear	3 hours	TLMI Method, 0.25 in. ² x 500g
Adhesive Coat Weight	1.75 g/100 in. ² ± 10%	3M Method E10MFP01
Release Range	3M™ Label Product FM090	30 to 100 g/2 in. TLMI Method, 180° removal, 300 in./min.
	3M™ Label Products FM092, FM092R, FM098	15 to 50 g/2 in. TLMI Method, 180° removal, 300 in./min.
	3M™ Label Product FM095	20 to 80 g/2 in. TLMI Method, 180° removal, 300 in./min.
	3M™ Label Product FM099	10 to 30 g/2 in. TLMI Method, 180° removal, 300 in./min.
Service Temperature	-20°F to 302°F (-29°C to 150°C)	
Application Temperature	40°F to 120°F (5°C to 49°C)	
Conformability	Semi-rigid – Label is suitable for flat or slightly curved surfaces.	

Features

- Meets CONEG requirements.
- Adhesive dry ingredients are listed by FDA as indirect food contact additives when used in food packaging with minimum opportunity for exposure. See 21 CFR 175.105.
- UL recognized for indoor use files MH11410 and MH16411, CSA approved file 076836.
- Liner for 3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM090 is ideal for most sheet on press applications. The backside of the sheet is printable.
- Liner for 3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM092 is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.
- Liner for 3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM092R is the same as FM092 except the liner has been remoisturized after silicone coating to restabilize the sheet and reduce side curl, an excellent choice for perforation and fanfold applications.
- Liner for 3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM095 is designed for the ultimate in layflat. The backside of this liner is not printable.
- Liner for 3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM098 has excellent caliper control and strength making it ideal for high speed labeling applications.
- Liner for 3M™ Indoor UL Recognized Matte Silver Polyester Label Product FM099 is used when high strength and caliper control are important. Recommended for high speed labeling applications or where clarity of the adhesive is critical.

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Printing

- Gloss topcoat is designed to be printable with a variety of film inks and thermal transfer ribbons. The following inks and thermal transfer ribbons have been evaluated and found to give excellent adhesion when tested with 3M™ Tape 610 and 3M™ Tape 810. However, press conditions vary and proper evaluation using your specific conditions is critical and highly recommended for successful ink and ribbon adhesion.

Supplier UV Inks	Ink Series	Printing Process
XSYS Print Solutions	UNV80071	Letterpress
	USC50022	Screen
	USC10031	Screen
Environmental Inks Nazdar Norcote	Ultra Kote 1800 OPV	Flexo
	PSST-3952	Screen
	02-022, 80049, 02304, 021019	Screen
Water Based		
XSYS Print Solutions	HMF80071	Flexo
	HMF90100	Flexo
	MHF30004	Flexo
Water Ink Technologies Environmental Inks	WFLO 42976	Flexo
	Aqua Polyscreen Plus	Flexo
Wykoff Inks	Aqua Poly Cup	Flexo
	SCF 6551	Flexo
Solvent Based		
Siegwerk Ink	FCTB65L2	Flexo
	FCTD65L4	Flexo
	FCTE65L3	Flexo
	FCTH65L5	Gravure
	GV124	Screen
Nazdar		
Thermal Transfer		
Ribbon Supplier	Ribbon Series	Ribbon Type
Armor	AXR7 +	Resin
	W137-C	Wax
DNP	M-250	Wax/Resin
	R510-W	Resin
	SP330, DC400	Resin
iimak	Prime Mark, PM350	Wax/Resin
	B110A	Wax/Resin
Ricoh	BC110C	Resin
Sony	3022, 4085 Plus	Wax
	4070	Resin (UV+)
	4075	Resin

Application Ideas

- Durable goods, nameplates, product ID labels.

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Storage Conditions Store under normal conditions of 70°F (21°C) and 50% relative humidity. To minimize the effects of humidity on the products, package the die-cut and printed stock in polyethylene bags. Low density polyethylene (2-4 mils) can help prevent humidity penetration.

Shelf Life To obtain best performance, use this product within two years from the date of manufacture.

Product Use All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors 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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ISO 9001:2000

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