



# Clear Polyester Label Products

## FM1541 • FM1542

Technical Data

July, 2010

### Product Description

3M™ Clear Polyester Label Products FM1541 and FM1542 are durable, high performance materials that offer excellent thermal stability and moisture resistance. These label products utilize 3M™ Adhesive R3500, which is designed for use on smooth surfaces such as glass, metal and plastic (including polystyrene) and offers excellent UV resistance, good initial tack, and long term adhesion with clean removability and is an excellent alternative to static cling.

**Note:** As a removable adhesive, performance may vary depending upon the substrate to which it is applied. Therefore, extensive testing should be conducted prior to use and textured surfaces should be avoided. Not appropriate for children’s toy or sticker applications.

### Construction

Product Number	Facestock	Adhesive	Liner
<b>3M label product FM1541</b>	.002 in. Clear Polyester NTC	R3500 Perm. 16	40# SC 2.4 mil semi-bleached super calendered kraft sheet
<b>3M label product FM1542</b>	.002 in. Clear Polyester TC	R3500 Perm. 16	50# SC 3.1 mil semi-bleached super calendered kraft sheet

(Calipers are nominal values)

### 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.

<b>Peel Adhesion</b>	Approx.	0.3 lbs./in. (53 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
<b>Loop Tack</b>	Approx.	0.5 lbs./in. (88 N/m)	TLMI Method, 12"/min., 1" wide sample
<b>Shear</b>		N/A	TLMI Method, 0.25 in. <sup>2</sup> x 500g
<b>Adhesive Coat Weight</b>		1.55 g/100 in. <sup>2</sup> ± 10%	3M Method E10MFP01
<b>Release Range</b>		15 to 50 g/2 in.	TLMI Method, 180° removal, 300 in./min.
<b>Service Temperature</b>		-20°F to 155°F (-29°C to 68°C)	
<b>Application Temperature</b>		40°F to 110°F (5°C to 43°C)	
<b>Conformability</b>		Semi-rigid – Label is suitable for flat or slightly curved surfaces.	

### Features

- Good initial tack.
- Long term adhesion with clean removability.
- Repositionable.
- Excellent UV resistance.
- Liner is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.

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## Printing

- Gloss topcoat for 3M™ Clear Polyester Label Product FM1542 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	Ultra Kote 1800 OPV	Flexo
Nazdar	PSST-3952	Screen
Norcote	02-022, 80049, 02304, 021019	Screen
<b>Water Based</b>		
XSYS Print Solutions	HMF80071	Flexo
	HMF90100	Flexo
	MHF30004	Flexo
Water Ink Technologies	WFLO 42976	Flexo
Environmental Inks	Aqua Polyscreen Plus	Flexo
	Aqua Poly Cup	Flexo
Wykoff Inks	SCF 6551	Flexo
<b>Solvent Based</b>		
Siegwerk Ink	FCTB65L2	Flexo
	FCTD65L4	Flexo
	FCTE65L3	Flexo
	FCTH65L5	Gravure
Nazdar	GV124	Screen
<b>Thermal Transfer</b>		
Ribbon Supplier	Ribbon Series	Ribbon Type
Armor	AXR7 +	Resin
	DNP	W137-C
	M-250	Wax/Resin
	R510-W	Resin
iimak	SP330, DC400	Resin
	Prime Mark, PM350	Wax/Resin
Ricoh	B110A	Wax/Resin
	BC110C	Resin
Sony	3022, 4085 Plus	Wax
	4070	Resin (UV+)
	4075	Resin

## Application Ideas

- Pre-mask/paint masking applications.

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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.

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

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**Technical Information** The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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**Product Use** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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**ISO 9001:2000**

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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