



Technical Data Sheet

3M™ Clear Polyester Durable Label Material FM042



Product Details



Regulatory Info/SDS

Product Description

3M™ Clear Polyester Durable Label Materials are durable high performance materials that offer thermal stability and moisture resistance. These products are suitable for demanding applications such as nameplates and product ID labels. These polyester labels utilize 3M™ Adhesive P1212, which is a high clarity general purpose acrylic emulsion for use on overlamination and decorative films and exhibits initial tack, die cutting properties, minimal cold flow, and UV resistance.

Product Features

- Indoor UL recognized files MH11410 and MH16411.
- Liner for 3M™ Clear Polyester Durable Label Material FM042 is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.

Technical Information Note

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

Typical Physical Properties

Attribute Name	Value
Adhesive Type	P1212 Perm. 18
Facestock	Clear Polyester TC
Adhesive Coat Weight	1.75 g/100 in ² ± 10%

Attribute Name	Value
Facestock Thickness	0.051 mm (2 mil)
Liner	50# SC semi-bleached super calendered kraft sheet
Liner Thickness	0.079 mm (3.1 mil)

Attribute Name	Value
*Note	For all clear film face and clear film liner material combinations, a slight appearance variation may be observed along the roll edge. This effect is due to the facestock's haze tolerance and is further magnified by the clear film liner and multiple wraps of clear films. This variation is not associated with a color shift of the facestock and does NOT negatively affect the labelstock's clarity in the final overlamination application.

Construction Tested

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

Typical Performance Characteristics

Test Method: TLM1

Attribute Name	Temperature	Substrate	Value
180° Peel Adhesion	23 °C (73 °F)	Stainless Steel	5.28 N/cm (48 oz/in) ¹
Liner Release	23 °C (73 °F)		15 — 50 g/2 in ²
Shear Adhesion			3 h ³
Loop Tack			3.16 N/cm (28.8 oz/in) ¹

¹ 304 mm/min (12 in/min)

² 180° removal, 300 in/min

³ 0.25 in² x 500g

Attribute Name	Value
Application Temperature	5 — 49 °C (40 — 120 °F)
Long Term Temperature Resistance	125 °C (257 °F) ¹
Minimum Long Term Temperature Resistance	-29 °C (-20 °F) ¹

¹ Long Term (day, weeks)

Attribute Name	Value
Note	Calipers are nominal values

Printing

High gloss general purpose topcoating is designed for use with a variety of film inks, including flexo, screen, ion deposition, off set, letter press, hot stamp, and thermal transfer printing (the end user should fully evaluate specific ribbons for suitability).

Water-based Flexo inks:

Akzo Nobel Hydro Film 4000 Series

Arcar Ultra Film Series 5 Inks

Water Ink Technologies, Inc. Versifilm

Ribbons:

Sony 4070

Sony 4075

Sony 5070

limak SP330

Handling/Application Information

Application Examples

Durable goods, nameplates, product ID labels.

Industry Specifications

UL Recognized, File PGGU2.MH11410, Marking & Labeling System Materials - Component, ANSI/UL 969

UL Recognized, File PGJ12.MH16411, Printing Materials - Component, ANSI/UL 969

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in a sealed plastic bag, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Information

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and 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. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g.,

OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd

3M is a trademark of 3M Company.
©3M 2024 (9/24)