

March, 2009

3M™ Destructible Acetate Label Product FA112

Product Description

3M™ Destructible Acetate Label Product FA112 offers consistent, high quality film that fractures when attempting label removal from many surfaces. This acetate label utilizes 3M™ Adhesive P1212, which is a high clarity general purpose acrylic emulsion for use on overlamination and decorative films that exhibits good initial tack, excellent die cutting properties, minimal cold flow, and good UV resistance.



Product Features

- 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.
- Meets CONEG requirements.
- Liner is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.
- The destructibility of the label depends upon adequate adhesion of the label to the substrate. A sufficient bond may not develop on all surfaces due to low surface energy, contaminated, or textured surfaces (see Application section for some suggested techniques). It is important to determine the suitability of the product in the intended application by carefully pretesting with application surfaces and real life conditioning.
- The primary function of the product is to produce a tamper-indicating label or seal by causing the label to fracture when removal from the substrate is attempted. Since no tamper-indicating feature is 100% tamper-proof, careful consideration must be taken when designing labels and seals. When the consequences of tampering could be severe, such as loss of life or significant monetary loss, these products are not recommended to be the sole means of package or product tamper indication. In these instances, additional methods in combination with the labels should be considered so that the tamper-indicating features are commensurate with the requirements of the application.

Technical Information Note

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

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 Physical Properties

Property	Values	
Facestock	Clear Destructible Acetate	
Facestock Thickness	0.051 mm	2 mil
Adhesive	P1212 Perm. 18	
Liner	50# SC semi-bleached super calendered kraft sheet	
Liner Thickness	0.079 mm	3.1 mil
Adhesive Coat Weight	1.58 to 1.93 g/100 in ²	

Convertability

3M™ General Purpose Acrylic Adhesive P1212 is designed to be compatible with a variety of print methods and indoor end use applications. Adhesive processing issues are not anticipated when proper roll tensions, handling and storage conditions are used. Please refer to the die cutting/converting section of this data page or the “Guide to Converting and Handling Label Products” technical bulletin for additional information.

Note

Calipers are nominal values

Typical Performance Characteristics

Property	Values		Method	Notes
Application Temperature	5 to 49 °C	40 to 120 °F		
Service Temperature Range	-29 to 60 °C	-20 to 140 °F		
180° Peel Strength	5.28 N/cm	48 oz/in	TLMI	12 in/min, 1 in wide sample
Loop Tack	3.16 N/cm	28.8 oz/in	TLMI	12 in/min, 1 in wide sample
Shear	3 hr		TLMI	0.25 in ² x 500g
Release Range	15 to 50 g/2 in		TLMI	180° removal, 300 in/min

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Environmental Performance

Not intended for outdoor applications or for use in areas of constant exposure to water or strong chemicals. It is recommended that polyester identification material or laminating films be used for these applications.

Handling/Application Information

Application Ideas

Packaging seals, calibration seals, asset labels.

Application Techniques

- Ensure that all corner radii are 5 mm or greater.
- Gutter between labels in the machine direction should be at least twice the width in the cross direction to avoid waste skeleton breaks.
- Long labels should lead with the shorter dimensions.
- Label shape should be as simple as possible, i.e., squares, rectangles or circles. T-shapes, tadpole, or butterfly shapes are possible but reduced running speeds may be necessary to facilitate matrix stripping.

Printing

This film should be printable via various print techniques including flexography, hotstamp, letterpress, and screen printing. Whenever printing 3M™ Acetate Label Products for the first time, with a different ink system, or on a new machine, we strongly recommend carrying out proofing trials to validate ink adhesion and durability prior to a full production run.

Converting

Die-cutting: Due to the fragile nature of the facestock, special handling (wider label matrix and wider edge trim to aid matrix stripping) should be considered when designing and processing fragile labels. For specific tips, see the IATD Technical Bulletin "Die-cutting Fragile Label Stocks." The manufacture of this film notes that:

- Flatbed or rotary dies can be used but be sure that a prepress die cutting trial is performed prior to running production.
- A stripping roller performs better than a stripping bar.
- Assist rollers may alleviate breaks at high speed due to the flexing of the die cylinder.
- Low temperatures increase the brittleness of the film and are to be avoided during die cutting.

Dispensing: The fragile facestock may present some difficulties in automatic dispensing. Testing with the intended application equipment and actual product samples are recommended before use.

Storage and Shelf Life

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.

To obtain best performance, use this product within one year from the date of manufacture.

Industry Specifications

FDA 21 CFR 175.105

Meets CONEG requirements

Family Group

	FA102	FA112
Facestock	White Destructible Acetate	Clear Destructible Acetate
Facestock Thickness (mm)	0.051	0.051
Adhesive	P1212 Perm. 18	P1212 Perm. 18
Liner	50# SC semi-bleached super calendered kraft sheet	50# SC semi-bleached super calendered kraft sheet
Liner Thickness (mm)	0.079	0.079

References

1. Safety Data Sheet

Url: https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=FA112

ISO Statement

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

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.

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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