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3M™ Destructible Vinyl Label Material 7613T

Product Description

3M™ Destructible Vinyl Label Materials 7613T is a consistent, smooth, topcoated film designed to exhibit immediate destructibility on many surfaces with low shrinkage vinyl and high dimensional stability. This material utilizes 3M™ High Holding Acrylic Adhesive 350, it offers excellent chemical resistance and holding strength even at high temperatures.



Product Features

- Low shrinkage vinyl material that produces dimensionally stable labels without adhesive ooze or dirty edges. Variable information can be added by the end-user as the material is thermal transfer printable.
- 3M™ Destructible Vinyl Label Material 7613T is a silicone-coated densified kraft liner for consistent rotary die-cutting and not recommended for layflat 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

Property	Values	
Destruct Pattern	Face tear	
Adhesive Thickness	0.02 mm	0.8 mil
Facestock	White Cast Vinyl Topcoated	
Facestock Thickness	0.051 mm	2 mil
Adhesive	Acrylic	
Liner	55# white densified kraft paper, silicone coated	
Liner Thickness	0.081 mm	3.2 mil
Adhesive Coat Weight	1.08 to 1.62 g/in ²	

Convertability

In order to capture the superior performance properties of 3M™ High Holding Acrylic Adhesive 350, thicker calipers are utilized for LSE or textured substrates. Its higher caliper, while desirable for the end use applications, may require extra care during processing. 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
Peel Adhesion	Label material Destroys N/cm			
Minimum Application Temperature	10 °C	50 °F		
Service Temperature Range	-40 to 149 °C	-40 to 300 °F		
Loop Tack	Label material Destroys N/cm		TLMI	12 in/min, 1 in wide sample

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Typical Performance Characteristics (continued)

Property	Values		Method	Notes
Shear	Label material Destroys hr		TLMI	0.25 in ² x 500g
Release Range	25 g/in		TLMI	180° removal, 90 in/min

Typical Peel Adhesion Properties:

Adhesion: ASTM D-3330 (modified): 90° peel, 12 inches/minute (305 mm/min).

	15 min. dwell Room Temperature		72 hr. dwell Room Temperature		72 hr. dwell 158°F (70°C)	
	oz/in	N/100mm	oz/in	N/100mm	oz/in	N/100mm
Stainless Steel	●		●		●	
Glass	●		●		●	
ABS (acrylonitrile butadiene styrene)	●		●		●	
Polycarbonate	●		●		●	
Polypropylene	●		●		●	
HDPE (high density polyethylene)	●		●		●	

*Not applicable. Label stock breaks when peeled.

No values recorded as facestock destructs / breaks when peeled.

Available Sizes

Packaging

Finished labels should be stored in plastic bags.

Environmental Performance

Labels were applied to stainless steel and dwelled 24 hours at room temperature before conditioning. Results were considered acceptable if no significant loss of adhesion occurred and label stock destructed when peeled from the surface.

Chemical Resistance: Bond is secure when exposed to the following:

Auto Oil: 72 hours at 120°F (49°C).

Weak Alkali: 4 hours at room temperature.

Weak Acid: 4 hours at room temperature.

NaCl Solution: 72 hours at room temperature.

Gasoline & MEK: Not recommended for use with MEK (methyl ethyl ketone) or prolonged immersion in gasoline. Whenever exposure to specific solvents is an important consideration, testing is recommended to assure adequate performance.

Water Resistance: Withstands exposure to water at room temperature for 100 hours.

Humidity Resistance: Withstands exposure to 90°F (32°C) and 90% RH for 168 hours.

Handling/Application Information

Application Ideas

- Safety warning labels
- Licensing labels and tags
- Warranty seals
- Calibration seals
- Package seals
- Asset labels
- Tamper evident labels

Handling/Application Information (continued)

Application Techniques

Determining Suitability:

The tamper-indicating mechanism (i.e. the facestock destruction) depends upon adequate adhesion of the label to the substrate. A sufficient bond may not develop on all surfaces due to low surface energy (e.g. PTFE), contaminated or textured surfaces. Therefore, it is important to determine the suitability of the product in the intended application by carefully pre-testing.

Dispensing:

Care should be taken not to disturb or nick the facestock when manually removing the label from the liner. Slowly remove the liner from the label at a 90° angle.

Surface Preparation:

Assume all surfaces to which these label materials will be applied are contaminated – metals may be oily or dusty, plastics may be coated with mold release agents, dirt, etc. Any surface contaminant will adversely affect adhesion and the ability to destruct: therefore, contaminants must be removed prior to application by wiping with a solvent such as isopropyl alcohol. Consult the manufacturer's Material Safety Data Sheet for proper handling and storage of solvents.

Application Pressure:

Application, temperature, pressure, and dwell time are all important variables to product adequate adhesion and assure the label fractures when removal or tampering is attempted. For best results, the label should be applied when all materials are over 50°F (10°C). Higher initial bonds can be achieved through increased application pressure (firm hand or squeegee pressure should be sufficient). The bond will increase in time, depending on the substrate. Metals and high surface energy materials will develop bonds faster than low surface energy materials.

Minimum Dwell Time:

For best results, wait 24 hours (at room temperature) before subjecting to harsh environments.

Note: Our tamper-indicating product line is designed to indicate tampering by destructing when an attempt is made to remove the label. Since no tamper indicating feature is 100% tamper proof, careful consideration must be taken when designing labels or seals. When the consequences of tampering could be severe, such as injury or loss of human life or significant monetary loss, these products are not recommended as the sole means of package or product tamper indication. In these instances, additional methods of combination with the labels should be considered so that the tamper-indicating features are commensurate with the requirements of the application.

Printing

This destructive vinyl label stock may be printable with some inks, but prime testing by the customer is critical to determine if product meets all customer requirements including print receptivity.

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."

Dispensing: The combination of the fragile facestock and aggressive adhesive 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 at room temperature conditions of 72°F (22°C) and 50% relative humidity.

If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

Family Group

	7613T	7930T
Adhesive Thickness (mm)	0.02	0.02
Facestock	White Cast Vinyl Topcoated	White Cast Vinyl Topcoated
Facestock Thickness (mm)	0.051	0.051
Adhesive	Acrylic	Acrylic
Liner	55# white densified kraft paper, silicone coated	90# Polycoated bleached kraft sheet polyethylene coated on two sides
Liner Thickness (mm)	0.081	0.17

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=7613T

ISO Statement

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

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