



Technical Data Sheet

3M™ Thermal Transfer Acrylate Label Material 3921



[Product Details](#)

Product Description

3M™ Thermal Transfer Acrylate Label Material 3921 consists of a non-topcoated acrylate facestock designed for thermal transfer printing and withstand high temperatures and resist chemicals such as those found in the fabrication of printed circuit boards (PCBs).

Product Features

- UL Recognized file MH16411
- Matte white facestock for print contrast and easy readability of barcodes and variable information.
- Acrylic based film for dimensional stability at high temperatures.
- 3M™ Acrylic Adhesive 150 will not degrade when exposed to standard printed circuit board assembly conditions.
- 55# densified kraft liner assures consistent die cutting.

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	#150 Acrylic
Facestock	Matte White Cast Acrylate Film

Attribute Name	Value
Adhesive Thickness	0.025 mm (1 mil)
Facestock Thickness	0.051 mm (2 mil)
Liner	55# Densified Kraft
Liner Thickness	0.076 mm (3 mil)

Typical Performance Characteristics

180° Peel Adhesion

Temperature: 22 °C (72 °F)

Dwell Time: 72 h

Test Method: ASTM D3330

Substrate	Value
Epoxy PC Board	Facestock tore ¹
Polycarbonate (PC)	6.3 N/cm (58 oz/in) ¹
Polypropylene (PP)	5.6 N/cm (51 oz/in) ¹
Stainless Steel	5.8 N/cm (53 oz/in) ¹

¹ 12 in/min (300 mm/min)

Attribute Name	Value
Note	Calipers are nominal values

Typical Environmental Characteristics

Humidity Resistance

24 hours at 100°F (38°C) and 100% relative humidity: no significant change in appearance or adhesion

Temperature Resistance

530°F (277°C) for 30 seconds: no significant visual change

500°F (260°C) for 7 minutes: slight browning

-40°F (-40°C) for 24 hours: no significant visual change

Processing

Printing: Facestock is designed for thermal transfer printing. Call 3M Customer Service at 1-800-422-8116 for additional information.

Recommended Ribbons: The following ribbons can be used but may require higher burn temperatures:

Armor: AXR7+, AXR7

Sony: TR4070

Die-cutting: Rotary die cutting is recommended.

Dispensing: Hand dispensing is recommended.

Packaging: Finished labels should be stored in plastic bags.

Handling/Application Information

Application Examples

- Printed circuit board tracking labels that see the following conditions:
- Solder re-flow.
- Top and/or bottom side wave solder.
- Most cleaning processes and chemicals.
- Labeling on parts exposed to high temperatures.

Application Techniques

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.*

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 50°F (10°C), can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

*When using solvents, read and follow the manufacturer's precautions and directions for use.

Industry Specifications

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 the original packaging, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Information

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ISO Statement

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

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