

3M™ Ultra-Thin Water Contact Indicator Tape 5559

Product Description

3M™ Ultra-Thin Water Contact Indicator Tape 5559 is a 5.0 mil thick self-adhesive product that quickly shows indication when contacted by water. When water comes in contact with the product, the **color RAPIDLY changes from white to red**. This product is designed to withstand heat and humidity aging without giving water indication and it will continue to show indication even after prolonged submersion in water. The top surface is printable by laser jet and ink jet techniques. The construction is readily die cuttable, making small custom shapes easy to produce. The high tenacity acrylic adhesive is protected by a silicone coated, polyester film release liner.

Product Construction

Backing	Top Film	Adhesive	Color	Standard Roll Length
Paper	None	Acrylic	White	180 yards

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. The adhesion data was generated using a 2 mil polyester film as a supplemental backing.

		ASTM Test Method
Adhesion to Stainless Steel: (90° Peel Adhesion, 12 in./min. peel rate, 20 min. Dwell)	28 oz./in. width (31 N/100 mm)	D-3330 (modified)
Adhesion to Stainless Steel: (90° Peel Adhesion, 12 in./min. peel rate, 72 hr. Dwell)	34 oz./in. width (37 N/100 mm)	D-3330 (modified)
Adhesion to Polycarbonate: (90° Peel Adhesion, 12 in./min. peel rate, 72 hr. Dwell)	35 oz./in. width (39 N/100 mm)	D-3330 (modified)
Tape Thickness:	5.0 mils (0.127 mm)	D-3652
Release Liner Thickness:	2.0 mils (0.081 mm)	D-3652
Humidity Resistance:*		

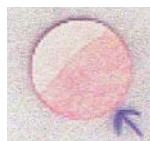
Control, t = 0 days



7 days @ 55°C, 95% R.H.



7 days @ 55°C, 95% R.H.
indicated w/1 drop H₂O for
one minute at arrow.



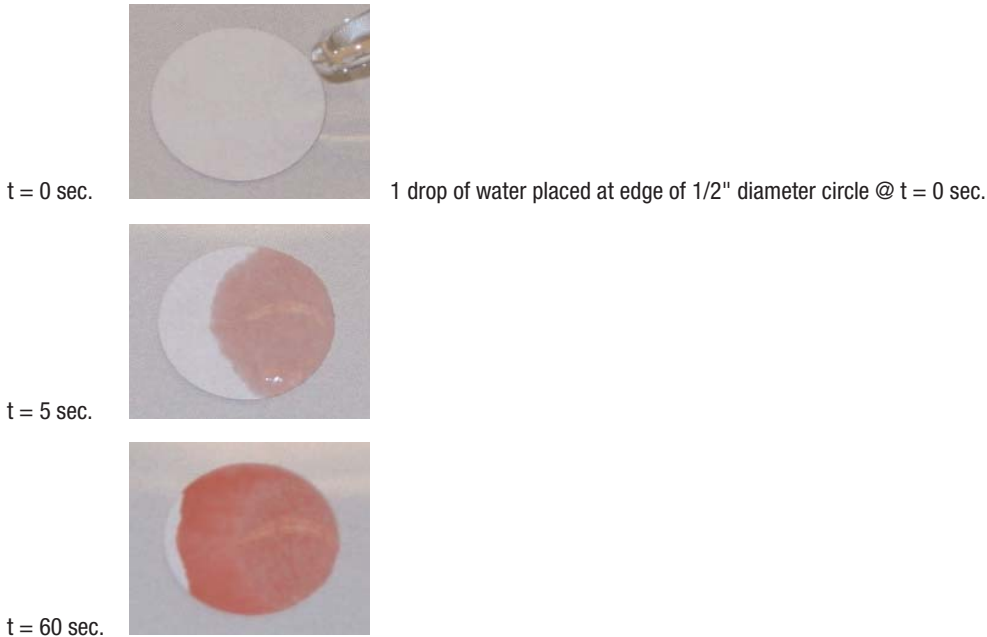
*Tape is applied to polycarbonate panel and hung vertically in heat/humidity chamber.



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Indication Properties

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General

- Tape may be die cut using rotary die cutting process.
- Substrate should be smooth, clean, dry and oil-free to insure good wet-out and adequate adhesion.
- Adhesive should not be applied at temperatures < 50°F (10°C) [best if room temperature or higher].
- Maximum roll length depends upon width.
- Maximum roll width = 12 in. (304.8 mm)
- Temperature resistance is -40°C to 65°C for days or weeks and up to 121°C for minutes or hours.

Application Ideas

- As a water contact indicator in handheld or portable electronic devices such as cell phones, PDA's, pagers, MP3 players, game players, CD players, cordless phones, two-way radios, laptops, digital or film cameras, video cameras, etc.
- The ultra thin caliper, 5.0 mils total, is suitable for applications with very tight design tolerances.

Key Attributes

Features	Benefits
Paper Backing	Highly absorbent, quickly transports water to show FAST indication. Does not falsely indicate water contact in high humidity exposures. Performance not degraded by past high humidity exposures. Rotary die cuttable. Can readily form variety of labels.
Acrylic Adhesive	3M™ Acrylic Adhesive 320 suitable for a wide variety of substrate materials.
2.0 mil Polyester Film Liner	Ideal for rotary die cutting.

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Storage

Store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% R.H. in the original carton.

Shelf Life

To obtain best performance, use this product within 12 months from date of manufacture.

Certification/Recognition

MSDS: 3M has not prepared a MSDS for this product which is not subject to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, the product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-251-8634. Address correspondence to: 3M Electronics Markets Materials Division, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55144-1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

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