3M™ Ultra-Thin Water Contact Indicator Tape 5559

Product Description

3M™ Ultra-Thin Water Contact Indicator Tape 5559 is an ultra-thin 5.0 mil (127 micron) thick tape that changes color RAPIDLY from white to red upon contact with water. It is designed to withstand heat and humidity aging without giving water indication. The top surface is press printable by laser and ink jet devices.

Features and Benefits

Paper Backing

- Highly absorbent, transports water to show indications

Acrylic Adhesive

- Very high bond strength to most surfaces including low surface energy plastics such as polypropylene and powder coatings

Total Construction

- Rotary die cuttable
- Thinner to enable slim electronics device design
- No film top layer

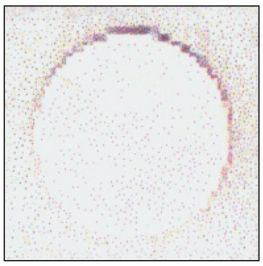
Product Construction

3M™ Ultra-Thin Water Contact Indicator Tape 5559	
Backing	Paper
Top Film	None
Adhesive	Acrylic
Color	White
Standard Roll Length	180 yards

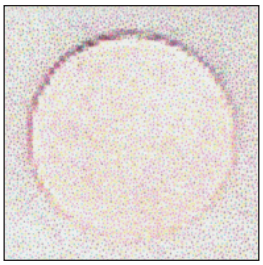
Typical Physical Properties

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.

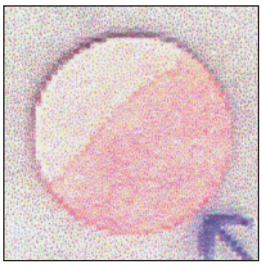
Property	Value	ASTM Test Method
Adhesion to Stainless Steel: (90° Peel Adhesion, 12 in/min peel rate, 20 min Dwell)	28 oz/in width (31 N/100 mm)	D-3330 (modified)
Adhesion to Stainless Steel: (90° Peel Adhesion, 12 in/min peel rate, 72 hr Dwell)	34 oz/in width (37 N/100 mm)	D-3330 (modified)
Adhesion 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 mil (0.127 mm)	D-3652
Release Liner Thickness:	2.0 mil (0.051 mm)	D-3652
Humidity Resistance:*		



Control, t = 0 days



7 days @ 55°C, 95% R.H.

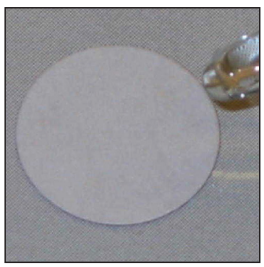


7 days @ 55°C, 95% R.H. indicated w/1 drop H_2O for one minute at arrow.

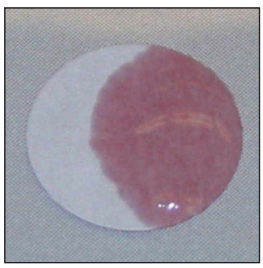
*Tape is applied to polycarbonate panel and hung vertically in heat/humidity chamber.

Indication Properties

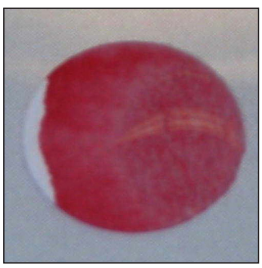
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. The adhesion data was generated using a 2 mil polyester film as a supplemental backing.



t = 0 sec.



t = 5 sec.



t = 60 sec.

1 drop of water placed at edge of 1/2" diameter circle @ t = 0 sec.

General Information

- 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 < 10°C (50°F) [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

- Use as a water contact indicator in handheld or portable electronic devices such as smart phones, tablets and phablets, laptop computers and keyboards, wearable electronic devices, gaming and MP3 players, two-way radios and cordless phones, digital and video cameras, Li-MH batteries and chargers.
- 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 Liner	Ideal for rotary die cutting.

Storage and Shelf Life

The shelf life of 3M™ Ultra-Thin Water Contact Indicator Tape 5559 is 12 months from the manufacture date when stored in original cartons at 21°C (71°F) and 50% relative humidity.

Regulatory

For regulatory information about this product, contact your 3M representative.

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

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