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Technical Data | August 2019

3M™ Water Contact Indicator Tape 5557

Product Description

3M™ Water Contact Indicator Tape 5557 is a 10.2 mil (259 micron) thick tape that changes color from white to red upon contact with water. It is designed to withstand heat and humidity aging without giving water indications. The tape permanently changes from white to red upon direct water contact.

Key Features

- Highly absorbent, paper backing to transport water to show indication
- Does not falsely indicate water contact in high humidity exposures
- Performance not degraded by high humidity exposure
- Printable top layer by thermal transfer, flexographic or screen-printing methods
- Easily die cuttable with rotary die cutting process
- Very high bond strength adhesive to most surfaces, including low surface energy plastics
- UL-969 compliant

Product Construction/Material Description

PET Top Film – permanent
Absorbent indicator layer
High performance acrylic adhesive
PET release liner (removable)

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

3M™ Water Contact Indicator Tape 5557 Property	Value
Color	White (top)/Red (bottom)
Top film	Polyester
Adhesive	Acrylic
Backing	Film/Paper Laminate
Thickness	10.2mils (0.259 mm)
Standard Roll Length	180 yards

Applications

- Use in water contact indicator in handheld or portable electronic devices.
- Smart phones, tablets laptop computers and keyboards.
- Wearable electronic devices
- Gaming and MP3 player
- Two-way radios
- Digital cameras
- Li-MH Batteries and chargers

3M™ Water Contact Indicator Tape 5557

- Ultra-thin caliper, 6.0 mils total, is suitable for application with tight design tolerances

Application Techniques

- Tape maybe die cut using rotary die cutting process
- Substrate should be smooth, clean, dry and oil-free to ensure good wet-out and adequate adhesion.
- Adhesive should not be applied at temperature lower than 10°C (50°F)
- Temperature resistance is -40 to 65°C for days /weeks or 121°C for minutes to hours.

Indicator Properties Typical Physical Properties and Performance Characteristics

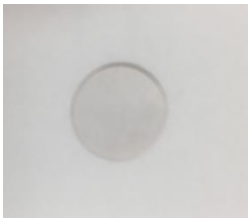
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

3M™ Water Contact Indicator Tape 5557		
Property	**Method***	**Value**
****Adhesion to Stainless Steel:** 90° Peel Adhesion, 5 mm/sec peel rate, 72-hr dwell time	ASTM D-3330	0.88 N/mm (82 oz/in)
****Adhesion to Polycarbonate:** 90° Peel Adhesion, 5 mm/sec peel rate, 72-hr dwell time	ASTM D-3330	0.52 N/mm (47 oz/in)
Tape Thickness	ASTM D-3652	0.259 mm (10.2 mil)
Release liner Thickness	ASTM D-3652	0.051 mm (2.0mil)

*Methods listed as ASTM are tested in accordance with the ASTM method noted
** The adhesive data was generated using a 2-mil aluminum foil as a supplemental backing.

Indicator Properties

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t = 0 sec.



t = 60 sec

1 drop of water place at edge of ½" diameter circle @ t = 0 sec

Storage and Shelf Life

The shelf life of 3M™ Water Contact Indicator Tape 5557 is 18 months from the date of manufacture when stored in the original packaging materials and stored at 21°C (70°F) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Contact your local 3M representative for this product's COA.

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This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

Safety Data Sheet: Consult Safety Data Sheet before use.

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

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