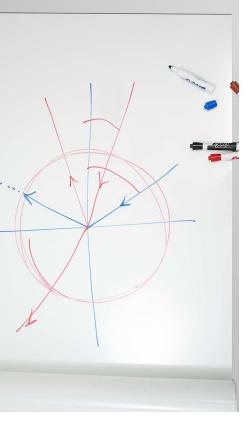
3M[™] DI-NOC[™] Whiteboard Film WH-111

Technical Data Sheet Revision G, September 2015



Product Description

3M[™] DI-NOC[™] Whiteboard Film WH-111, the "Product", is a unique architectural finish with a writable and erasable surface that can be used to convert interior surfaces into creative, collaborative environments. The Product has a pressure-sensitive adhesive that allows installation to a wide variety of application surfaces.



Featured Benefits

- Superior anti-ghosting performance
- Flexible, durable polyester
- Suitable for use in offices, schools, healthcare and other interior environments
- Can be installed on a wide variety of interior surfaces. For application on glass, use 3M[™] FASARA[™] Whiteboard Film WH-111-G
- Meets U.S. building regulations for flammability resistance
- Abrasion, stain and chemical resistant
- Compatible with most standard dry erase markers and erasers
- Easy Application 3M[™] Comply[™] Adhesive technology virtually eliminates bubbles, simplifying and speeding application. It also bonds powerfully to many application surfaces.
- Expected Performance Life is 5 years for indoor, vertical applications with no direct UV exposure.

Product Characteristics

The values in these tables are typical, and are based on test data deemed reliable but are not warranted.

Characteristic		Value
Material	Film	Polyester
	Adhesive	Pressure-sensitive acrylic, permanent
	Release Liner	Silicone-coated poly paper
Thickness	Film + Adhesive	6.7 mils (170 microns) not including release liner
	Release Liner	6.2 mils (157 microns)
Roll Size		49.2 in. x 98 ft. (1250mm x 30 m)
Weight		Approximately 35 lb. (15.6 kg) for a 30 m roll



Product Performance

The values in these tables are typical, and are based on test data deemed reliable but are not warranted.

Characteristic	Results	
Adhesion 24 hours after application*	Glass: 4 lb/in. (19 N/25mm)	
Abrasion Resistance	Abraded 10 strokes with steel wool under a load of 0.5kg No noticeable scratches	
Dimensional Stability	Largest gap: < 0.01 in. (0.2mm) Test sample applied to aluminum plate, 4 in. x 4 in. (100mm x 100mm) crosscut in film, after 48 hours at room temperature.	
Fire Resistance	When used in Interior Applications, the Product has the National Fire Protection Association Class A rating (as defined in NFPA 101 "Life Safety Code" Test Method ASTM E84).	

* Test specimens were applied to the substrate and conditioned at 68 F (20 C), then peel tested at 180 degree at a tensile speed of 12 inches (300 mm) per minute.

Stain Resistance

Characteristic	Evaluation	Results
Stain and Chemical Resistance	Direct contact for 18 hours with the following sub- stances: Salt water (5%) Household Ammonia Soapy Water (1%) Neutral Cleaner Hydrochloric Acid (10%) Ethyl Alcohol (50%) Formalin (36%) Milk Coffee Tea Wine Vinegar Ketchup Oleic Acid/Vegetable oil	No permanent staining

The above data are representative values and are not guaranteed.

Product Use

The user is solely responsible for evaluating and determining whether these 3M Products are suitable and appropriate for any particular use or manufacturing process in which they may be used.

Consider These Factors in Determining the Suitability of the Product

- For interior use only.
- For best appearance of the Product, apply only to application surfaces that are smooth, such as flat metal panels or baked painted steel panels. Application to other very smooth application surfaces may be possible.
- Irregularities in the application surface, such as surface texture, will show through after application due to the glossy appearance of the Product. For drywall installation, a Level 5 Gypsum Board Finish (ASTM C840) is recommended.
- Recommended for flat or slightly curved surfaces only.
- Product is not intended for electronic cutting.
- The Product has an erasable surface layer that makes it unsuitable for printing.

Application and Removal Guidelines

Characteristic	Value
Application Surface Type	Smooth, hard, non-porous (sealed) material
Application Location	Interior
Application Temperature	60 °F - 100 °F (10 °C - 38 °C) air and application surface
Application Method	Dry application
High Humidity Environments	Products are not recommended for Interior Applications where condensation consistently occurs.
Product Removal	Heat at 176 °F - 212 °F (80 °C - 100 °C)

Installation Considerations

Use the application technique as described in the *3MTM DI-NOCTM Architectural Finishes Installation Guide*. In addition, please consider the following:

- Always handle the Product with care.
- The Product edges may be sharp; use caution when handling.
- Avoid scratching or denting the surface during installation as this may affect writing performance.
- Before setting the adhesive to the application surface:
 - Ensure proper alignment by using a guideline. Allow additional material for trimming as necessary.
 - Ensure that the entire surface of the film is flat against the application surface and the ends of the film do not sag.
- Stretching or attempting to reposition the Product during application may deform, buckle, or ripple the Product.
- Wrinkles created during application cannot be removed with heat due to polyester construction.
- Seams tend to accumulate ink from the markers. Make seams as tight as possible.

Removing the Product

Removing the Product too quickly can result in excessive adhesive left on the application surface. If necessary, heat a small section of the Product with a heat gun to soften the adhesive, peel back slowly, then heat and remove the next section.

NOTE: Removal of WH-111 from application surfaces other than painted metal panels may result in damage to the application surface.

Using the Product as Whiteboard

- Most standard dry erase markers for whiteboard are suitable for writing on the Product.
- To minimize ghosting, erase writing as soon as possible using an eraser designed for whiteboards, soft paper towels, whiteboard cleaning spray, water, or whiteboard cleaning wipes.

NOTE: DO NOT use non-whiteboard cleaning wipes.

- To prevent ink debris from sticking to the Product, use soft paper towels with whiteboard cleaning spray or water as needed to pick up the ink debris. Change to a new eraser or use new whiteboard cleaning wipes often.
- NEVER use permanent markers or felt pens. Only use select dry erase markers for writing on the Product.
- If a non-specified marker is accidentally used, write over the non-specified mark with a dry erase marker, then wipe it off immediately using the maintenance method below.
- **NOTE:** Upon initial use, the dry erase marker ink may not adhere well to the Product surface. Writing with a dry erase marker and erasing several times will "break-in" the surface.

Maintenance

- Erase content from the Product as soon as it is no longer needed.
- To remove ink buildup and debris from the whiteboard surface, use water and soft paper towels as needed. For more effective cleaning, add a few drops of mild detergent, such as baby shampoo, to the water.

Shelf Life and Storage

Shelf Life

Apply the Product within 2 years of the date of purchase. The storage conditions specified in this document must be maintained for full shelf life.

Storage Conditions

- 40°F 90°F (4°C 32°C)
- Away from direct sunlight and high humidity
- Clean, dry area
- · Original container with end caps, in the plastic sleeve, stored horizontally, a maximum of 6 cartons high
- Bring the Product to room temperature before application

Health and Safety

A CAUTION

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to <u>3M.com/SDS</u>, or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

Technical Information

Technical information and data, recommendations, and other statements provided by 3M are based on information, tests, or experience which 3M believes to be reliable, but the accuracy or completeness of such information is not guaranteed. Such technical information and data are intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. The typical values shown should not be used for the purpose of specification limits. If you have questions about this Product, contact the Technical Service helpline at 1-888-650-3497.

For more information or to order samples, please visit www.3M.com/Whiteboard.

Change History

Rev G (15-SEPT-2015):

- Added Expected Performance Life
- New "Shelf Life and Storage" section
- Added revision and doc type to footers, and other formatting changes.

Rev F (23-JUN-2015):

- Removed alcohol cleaning procedures and references
- Updated Warranty language, adding "3M Basic Product Warranty" and other changes
- Added revision and doc type to footers, and other formatting changes.

WARRANTY

Product

3M DI-NOC Whiteboard Film WH-111 (the "Product").

3M Basic Product Warranty

The Product(s) specified in this document are warranted to be free of defects in materials and manufacture ("3M Basic Product Warranty") at the time of shipment ("Warranty Period") by 3M or its authorized distributor.

Limited Warranty

- 1. For the Product(s) specified in this document, 3M makes the 3M Basic Product Warranty only.
- For a buyer's convenience, 3M may provide engineering or technical information, recommendations, installation instructions or guides, and other information or materials relating to a Product ("Other Product Information"), but 3M makes only the 3M Basic Product Warranty and does not warrant any Other Product Information.
- 3. 3M has no obligation under the 3M Basic Product Warranty as to Product that has been: (a) modified, altered or processed in any manner; (b) stored, applied, installed, or used in a manner other than that 3M recommends in this document and in all Other Product Information; (c) damaged through contact with a person or thing, misuse, accident, neglect, or other action by anyone other than 3M; (d) improperly installed, including, without limitation, installation after the expiration the Product's shelf life or installation without proper surface preparation, or (e) exposed to excessive heat, humidity, dirt or UV light.
- 4. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THE 3M BASIC PRODUCT WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, RIGHTS OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WAR-RANTY OF MERCHANTABILITY, SATISFACTORY QUALITY, FIT-NESS FOR A PARTICULAR PURPOSE AND THOSE ARISING FROM A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. THE BUYER IS RESPONSIBLE FOR DETERMINING IF A PRODUCT IS SUITABLE FOR ITS PARTICULAR PURPOSE AND APPLICATION METHODS.
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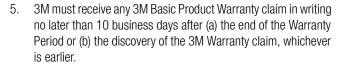
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Limited Remedy

IF ANY PRODUCT IS PROVEN NOT TO HAVE MET THE 3M BASIC PRODUCT WARRANTY DURING THE WARRANTY PERIOD, THEN THE BUYER'S EXCLUSIVE REMEDY, AND 3M'S SOLE OBLIGATION, WILL BE, AT 3M'S OPTION, TO REPLACE THE NONCONFORMING PRODUCT OR TO REFUND THE NONCONFORMING PRODUCT'S PURCHASE PRICE.

Limitation of Liability

3M WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO A BUYER FOR DIRECT (other than the Limited Remedy stated above), SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS) IN ANY WAY RELATED TO THE PRODUCT, THIS DOCUMENT OR OTHER PRODUCT INFORMATION, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY ON WHICH SUCH DAMAGES ARE SOUGHT.

