

## Product Description

3M™ DI-NOC™ Projection Screen Whiteboard Film PWF-500 (the “Product”) is a unique architectural film with both whiteboard and projection capabilities that offers great versatility 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

- Whiteboard and projection capabilities
- Matte finish provides minimal glare from projector
- Flexible, durable vinyl
- Suitable for use in collaboration spaces 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
- Compatible with EXPO® Low Odor (not washable), Quartet®, Staples® ReMarx®, Avery® Marks-A-Lot®, and OfficeMax® dry erase markers
- 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	Vinyl
	Adhesive	Pressure-sensitive acrylic, permanent
	Release Liner	Silicone-coated poly paper
Thickness	Film + Adhesive	9.1 mils (230 microns) not including release liner
	Release Liner	6.2 mils (157 microns)
Maximum Roll Size		48 in. x 98 ft. (1220mm x 30 m)
Maximum Weight		Approximately 37.5 lb. (17 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*	Aluminum: 9 lb/in.(38 N/25mm)
Abrasion Resistance	Abraded 10 strokes with steel wool under a load of 1.0 kg. No noticeable scratches
Dimensional Stability (applied to aluminum plate)	Largest gap: < 0.01 in. (0.3mm) 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 application surface and conditioned at 68°F (20°C), then peel tested at 180 degree at a tensile speed of 12 in. (300 mm) per minute.

## Product Performance (continued)

### Stain Resistance

Characteristic	Evaluation	Results
<b>Stain and Chemical Resistance</b>	Direct contact for 18 hours with the following substances:	
	<b>Foodstuffs</b> <ul style="list-style-type: none"> <li>● Milk</li> <li>● Coffee</li> <li>● Tea</li> <li>● Wine</li> <li>● Soy sauce</li> <li>● Vinegar</li> <li>● Ketchup</li> <li>● Oleic Acid/Vegetable oil</li> <li>● Citric acid</li> </ul>	<b>Chemicals</b> <ul style="list-style-type: none"> <li>● Salt water (5%)</li> <li>● Household Ammonia</li> <li>● Soapy Water (1%)</li> <li>● Neutral Cleaner</li> <li>● Hydrochloric Acid (10%)</li> <li>● Caustic soda (10%)</li> <li>● Ethyl Alcohol (50%)</li> <li>● Formalin (36%)</li> <li>● Hydrogen peroxide (3%)</li> </ul>
		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 PWF-500, apply only to application surfaces with a smooth surface, 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 of the Product. For drywall installation, the following is recommended:
  - Level 5 Gypsum Board Finish (ASTM C840)
  - Seal/Prime the drywall surface
  - For painted surfaces, wipe with 70/30 IPA cleaning solution (70% isopropyl alcohol/30% water) and let dry 10 minutes before installation
- 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.
- The Product works best with short-throw projectors. Long-throw projectors may cause hot spot issues.

## Application and Removal Guidelines

Characteristic	Value
<b>Application Surface Type</b>	Smooth, hard, non-porous (sealed) material
<b>Application Location</b>	Interior
<b>Application Temperature</b>	54 °F - 100 °F (12 °C - 38 °C) air and application surface
<b>Application Method</b>	Dry application
<b>High Humidity Environments</b>	Products are not recommended for Interior Applications where condensation consistently occurs.
<b>Product Removal</b>	Heat at 176 °F - 212 °F (80 °C - 100 °C)

## Application and Removal Guidelines (continued)

### Installation Considerations

Use the application technique as described in the *3M™ DI-NOC™ 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.
- Horizontal installation at eye level is preferred to allow continuous writing and erasing along the length of the whiteboard area.
- 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 easily be removed with heat.
- Seams tend to accumulate ink from the markers. Make seams as tight as possible, or preferably, make seams with 1/2 inch overlap and use 3M™ Primer 94 under the overlap.

### 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 PWF-500 from application surfaces other than painted metal panels may result in damage to the application surface.

### Using the Product as Whiteboard

- EXPO® Low Odor (not washable), Quartet®, Staples® ReMarx®, Avery® Marks-A-Lot®, and OfficeMax® dry erase markers are suitable for writing on the Product.
- Erase writing as soon as possible using 3M™ Microfiber Cleaning Cloth or 3M™ Post-it® Dry Erase Cleaning Cloth, 3M™ Whiteboard Erasers, or soft paper towels with optional water as needed.

**NOTE:** DO NOT use whiteboard cleaning wipes or any other cleaning wipes. Rigid, flat erasers are not recommended.

- To prevent ink debris from sticking to the Product (i.e. ghosting), use 3M™ Microfiber Cleaning Cloth or 3M™ Post-it® Dry Erase Cleaning Cloth, 3M™ Whiteboard Erasers, or soft paper towels with water or whiteboard cleaning spray as needed to pick up the ink debris. Wash or replace cleaning clothes 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.
- When needed to remove buildup of ink debris, clean the surface using many soft paper towels to wipe the ink debris away and liberal use of water. Add a few drops of mild detergent, such as baby shampoo, for more effective cleaning.

## 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

### 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 [3M.com/SDS](https://www.3m.com/SDS), 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.

## LEEDv4 CREDITS

This section describes some of the options for acquiring LEED credits using 3M™ DI-NOC™ Architectural Finishes.

**NOTE:** Each application is different. It is the sole responsibility of the end user to evaluate and determine whether LEED credits can be applied.

### ID+C MR Credit, Interiors Life-Cycle Impact Reduction

- Option 1: Interior Reuse - Product can be used to refinish salvaged, refurbished, or reused nonstructural materials.
- Option 2: Furniture Reuse - Product can be used to refinish salvaged, refurbished, or reused furniture and furnishings.

### ID+C, BD+C MR Credit, Construction and Demolition Waste Management

- Option 2: Product can be used to refinish salvaged, refurbished, or reused interior materials minimizing overall construction waste.

### ID+C, BD+C EQ Credit, Low-Emitting Materials

- Product has been tested to and is in compliance with the General Emissions Evaluation (California Department of Public Health (CDPH) Standard Method V1.1-2010)

### BD+C MR Credit, Building Life-Cycle Impact Reduction

- Option 3: Building and Material Reuse - Product can be used to refinish permanently installed interior elements (e.g. walls, doors).

### BD+C MR Credit, Furniture and Medical Furnishings

- Option 3: Multi-attribute assessment of products - Product can be used to refinish permanently installed interior elements (e.g. walls, doors).

### O+M MR Credit, Purchasing - Facility Maintenance and Renovation

- Product can be used to refinish permanently installed interior elements (e.g. walls, doors)
- Product has been tested to and is in compliance with the General Emissions Evaluation (California Department of Public Health (CDPH) Standard Method V1.1-2010)

## BUILDING PRODUCT DISCLOSURE AND OPTIMIZATION INFORMATION

### Environmental Product Declaration (EPD) or Life Cycle Analysis (LCA)

EPD and/or LCA information not available.

### Raw Material Source and Extraction Reporting

Raw Material source and extraction information for this product is considered to be 3M confidential and is therefore not available.

### Extended producer responsibility

Take-back or recycling program for this product is not available.

### Bio-based materials

Product have not been tested to ASTM D6866.

### Wood products

Product does not contain wood-based materials.

### Materials reuse

Product can be used to refinish salvaged, refurbished, or reused materials and furniture.

### Recycled content

Product does not contain pre- or post-consumer recycled content.

## Material Ingredient Reporting

Product ingredient information for this product is considered to be 3M confidential and is therefore not available .

## GreenScreen Benchmark or Cradle to Cradle Certification

Assessment or Certification not available on this product.

## REACH Optimization

REACH Substance of Very High Concern certifications are on [3M.com/Regs](http://3M.com/Regs) (US) or [3M.com/SVHC](http://3M.com/SVHC) (Europe).

## Product Manufacture Supply Chain Optimization

Based on our analysis, 3M meets required process and safety requirements as outlined in the criteria.

## Location Valuation Factor

Based on supply chain, this product would not meet location valuation factor requirements of being extracted, manufactured, and purchased within 100 miles.

## WARRANTY

### Product

3M™ DI-NOC™ Projection Screen Whiteboard Film PWF-500 (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

- For Products used in Interior Applications in the United States, 3M makes the following warranty (the “3M Limited Warranty”) for the applicable time period stated below (“Warranty Period”), which will begin on the earlier of: (a) Product installation date; or (b) six months after 3M’s Product shipment date.

The Product will have no significant discoloration, cracking or other similar visual defects. This warranty does not cover stains due to use of non-whiteboard markers or surface damage due to improper cleaning.

Application	Warranty Period
Interior Applications with no direct UV exposure <sup>1</sup>	3 years
Exterior application surfaces <sup>2</sup>	Not warranted

**1 - Applications with direct UV exposure are not warranted.**

**2 - Application of the Product to exterior application surfaces is not warranted.**

- 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 the 3M Limited Warranty, and does not warrant any Other Product Information.
- 3M has no obligation under the 3M Basic Product Warranty or the 3M Limited 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.
- EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THE 3M BASIC PRODUCT WARRANTY AND THE 3M LIMITED WARRANTY ARE MADE IN LIEU OF ALL OTHER WARRANTIES, RIGHTS OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS 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.
- 3M must receive any 3M warranty claim in writing no later than 10 business days after (a) the end of the Warranty Period or (b) the discovery of the 3M warranty claim, whichever is earlier.

## WARRANTY (continued)

### Limited Remedy

IF ANY PRODUCT IS PROVEN NOT TO HAVE MET THE 3M BASIC PRODUCT WARRANTY OR THE 3M LIMITED 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.

### No Extension of Warranty

In the case of an approved warranty claim, the replacement Product will carry only the remaining term of the original warranty period.

### 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, THE TECH DATA SHEET OR OTHER PRODUCT INFORMATION, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY ON WHICH SUCH DAMAGES ARE SOUGHT.

#### Commercial Solutions

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