### **Product Description**

3M™ DI-NOC™ Architectural Finishes Abrasion Resistant AR Series are decorative surface finishes for interior applications in high-traffic areas. The abrasion resistant top layer reduces the visibility of scratches.

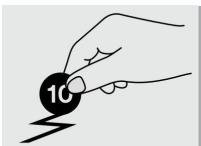
3M™ DI-NOC™ Architectural Finishes are CE marked according the Construction Products Directive 89/106/EEC and tested according to the EN 15102: 2007+A1:2011 Decorative Wall Covering. For performance characteristics please see the referring Declaration of Performance by comparing the listed design series with our product catalogue.

Please refer to the <u>3M™ DI-NOC™ installation guidelines</u> for additional information on dry application.

Note: This document uses hyperlinks. Please follow the links for additional information.

#### **Featured Benefits**

- Interior Applications Ideal for high-traffic areas where scratches occur, such as elevators, counters, table tops, doors, or columns.
- Reduces visible scratch in high-traffic areas (see Figure 1). Debris can be wiped off with a cloth.
- Application Surfaces Use on metal, wood, glass and complex curved surfaces.
- Aesthetics New matte technology gives the realistic appearance of natural materials for select designs (see Figure 2).
- Remodel and Reuse Shortens refurbishment downtime and brings entirely new designs to existing assets.
- Easy Application 3M<sup>™</sup> Comply<sup>™</sup> Adhesive technology virtually eliminates bubbles, simplifying and speeding application (see Figure 3).



Incident Light Specular Reflection

Diffuse Reflection

Matte Technology

Film

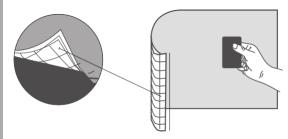


Figure 1: 3M™ DI-NOC™ Abrasion Resistant AR Series reduces visible scratches in high-traffic areas

Figure 2: New Matte Film Technology

Figure 3: 3M<sup>™</sup> Comply<sup>™</sup> Air-Release Channels

#### **Product Line**

AE Earth/Stone Mortar/Industrial CH Metallic Hairline

**FA Multiple Categories** 

FW Fine Wood

ME Metallic

PA Metallic

**PS Single Color** 

PT Abstract

SE Abstract

ST Stone

WG Wood Grain



# **Exposure Angle and Expected Performance Life**

#### **Climate Zones**

Graphic durability is largely determined by the climate and the angle of exposure. Find below a table showing the durability of a product according to the angle of exposure and the geographical location of the application.

Zone 1: Northern Europe, Italy (north of Rome), Russia

Zone 2: Mediterranean area without North Africa, South Africa

Zone 3: Gulf area, Africa

Exposure Type	Exposure Definition	Diagram	Expected Performance Life		
			Zone 1	Zone 2	Zone 3
Vertical interior* application	The face of the film is less than 10 degrees from vertical.	face of graphics	12 years	12 years	12 years
Vertical outdoor exposure (only for films which have the outdoor recommendation)	The face of the film is less than 10 degrees from vertical.	face of graphics	5 years	4 years	3 years

<sup>\*</sup> Interior means an application inside a building without direct exposure to sunlight.

### **Characteristics**

These are typical values for unprocessed product. Processing may change the values.

## **Physical Characteristics**

Characteristic	Value	
Material	PVC	
Thickness	Designs vary in thickness.	
	With adhesive: 240 μm	
Adhesive	Acrylic	
Liner	Polyethylene coated paper	
	Substrate:	Adhesion:
Adhesion	Veneer	4.9 N/25 mm
FTM 1: 180° peel, substrate: see listed;	Melamine Baked Steel Sheet	30.4 N/25 mm
cond: 24 h 23°C/50%RH	PVC	44.1 N/25 mm
	Aluminium	29.1 N/25 mm
	Stainless Steel Sheet	37.2 N/25 mm
	Acrylic Board	38.2 N/25 mm
	Mortar	3.9 N/25 mm



## **Application Characteristics**

Characteristic	Value	
Application Recommendation		
Application Method	Dry only!	
Surface type	Flat: +12°C	
	Curved: +16°C	
	Moderate compound curves and corrugations: +18°C	
Application Temperature, air and application surface	3M recommends applying 3M™ DI-NOC™ products at +12°C to +38°C.	
Removal	These films can be removed with the aid of heat.	
	No liability is given for ease or speed of removal of any graphic. Pay attention to adequate air and substrate temperature.	

The values above are the results of illustrative lab test measurements and shall not be considered as a commitment from 3M.

#### **Flammability**

Flammability standards are different from country to country. For references please see <u>Declaration of Performance</u>. In any case, please ask your local 3M contact for details.

## **Processing Options**

Processing of 3M<sup>™</sup> DI-NOC<sup>™</sup> is on a user test and approve basis only. The user is responsible for results in all processing applications.

#### Printing

3M™ DI-NOC™ Architectural Finishes are not designed for surface printing. Printing is on a user test and approve basis only. No warranty is made for the quality or durability of printed 3M™ DI-NOC™ Architectural Finishes.

#### Cutting

Electronic cutting, weeding and application tape with 3M™ DI-NOC™ Architectural Finishes must be used only on a user test and approve basis. The user should consider that the type of liner used for 3M™ DI-NOC™ Architectural Finishes is not intended for electronic cutting.

See <u>3M Instruction Bulletin 4.1</u> for Sheeting, Scoring and Film Cutting details.

It is recommended to weed 3M<sup>™</sup> DI-NOC<sup>™</sup> Architectural Finishes immediately after cutting. This is to minimize the effect of possible adhesive flow 24 hours or more after cutting.

Note: 3M<sup>™</sup> DI-NOC<sup>™</sup> is not treated with antistatic charges.

#### **Chemical Resistance**

Product applied to an aluminum panel, conditioned for 72 hours and then immersed in the chemical agents.

Chemical agent	Exposure time	Result
Hydrochloric acid (10%)	24 hours	No visible change
Sodium Hydroxide (10%)	24 hours	No visible change
Water	24 hours	No visible change
Ethanol	24 hours	No visible change
Ethyl Acetate	5 minutes	Deterioration observed
Methyl Ethyl Ketone	5 minutes	Deterioration observed
Toluene	5 minutes	Deterioration observed



## **Stain Resistance**

Contaminant was in contact with the film surface for 24 hours and then removed using water or mild detergent. Dilute Isopropyl alcohol may be used for more difficult stains. Results may vary.

Contaminant	Results
Coffee	•
Tea	0
Cola	•
Milk	•
Red Wine	•
Soy Sauce	•
Cooking Oil	•
Vinegar	•
Crayon	0
Saltwater (1%)	•
Soap solution (1%)	•
Ammonia Solution (10%)	•
Hydrogen peroxide water (3%)	•
Citrate Solution (10%)	•
Ethyl Alcohol (50%)	•

- Removed with water
- Removed with mild detergent A little stain remained



# 3M<sup>™</sup> DI-NOC<sup>™</sup> Architectural Finishes Abrasion Resistant AR Series

## **Primer**

Generally, on flat surfaces primer is not required. Primer is recommended at 3M™ DI-NOC™ overlaps, underneath the butt joint, ends, corners or edges, or around fixtures. It should also be used wherever 3M™ DI-NOC™ is stretched. Also, if the surface energy of the substrate is low or on critical surfaces with sharp radius, primers should be used. For high surface energy substrates such as metal or paint no primer is required. See overview of primers below:

Primer	Substrate
Solvent based	Calcium Silicate (with sealer coating)
(Generally used on low surface energy substrate)	Plywood
Solvent primers are:	MDF board
Scotchmount™ 4297 or Primer 94 (from 3M	Gypsum board
Automotive)	Aluminum
	Anodized Aluminium
	Stainless steel
	Painted or coated metals
	Films (including 3M™ DI-NOC™ films)
	PVC laminated steel
	Mortar (with sealer coating)
	Glass
	ABS
	Acrylic
	Polyester
	PETG
	Polypropylene
	Polycarbonate
Water based	Calcium Silicate (with sealer coating)
WP-2000	Plywood
(can be diluted 1 part primer 2 parts water)	MDF board
Without diluting primer is high in viscosity	Gypsum board
	Plaster board
	Aluminum Anodized Aluminium
	Stainless steel
	Films (including 3M™ DI-NOC™ films) Glass
	ABS
	Acrylic
	Polyester
	PETG
	Polypropylene
	Polycarbonate
	i Orycarbonate
Water based	Plywood
WP-3000	MDF board
(for small areas)	Painted or coated metals, etc.

The use of primer on critical surfaces may promote adhesion to substrate. Verification of individual cases is necessary to find out which promoter is the best to use (all-over or partial).



### **Warranty Information**

3M™ DI-NOC™ Architectural Finishes are decorative films in product series that are designed for use only in interior applications in commercial buildings.

## **3M Basic Product Warranty**

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin.

### **Limited Remedy**

3M recommended product end uses are listed in each 3M graphics product bulletin.

End uses not listed in the applicable 3M Graphics Product Bulletins are typically not eligible for 3M Graphics Warranties.

- For all product end uses (recommended or not recommended), user remains solely responsible for evaluating, testing and approving this 3M product and determining whether it is appropriate and suitable for customer's application.
- For non-recommended and/or non-warranted end uses or applications, users must assume any associated risks, and acknowledge that 3M has no liability for such end uses or applications.

Please contact your 3M representative with any questions about graphic applications, end uses, and warranties.

### Limitations of liability

All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

## **Application**

In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply 3M™ DI-NOC™.

See 3M <u>Instruction Bulletin DI-NOC</u> Installation Guidelines for interior dry applications of 3M<sup>™</sup> DI-NOC<sup>™</sup> Architectural Finishes Standard.

A significant decrease in durability may be experienced if films are exposed other than vertically. Such non-vertical application should be based on 3M tests results and approval to determine acceptability. However, actual performance will be determined by substrate selection and preparation, exposure conditions and maintenance.

When 3M™ DI-NOC™ Architectural Finishes is used horizontally, for example on a counter, it can be exposed to abrasion which is greater than normal. This can lead to premature wear and/or damage to the film. In these cases, 3M™ DI-NOC™ Architectural Finishes Abrasion Resistant Series is recommended. 3M does not recommend the use of an overlaminate.

## Maintenance, Cleaning and Removal

Regular cleaning will help maintain the appearance of the finish. Use mild detergent and water, and a soft cloth or sponge without abrasives. For difficult stains, spot clean with a diluted Isopropyl Alcohol solution and a soft cloth. Avoid using strong solvents or detergents that are either highly alkaline (pH>11) or acidic (pH<3). Do not use ammonia, chlorine, or strong organic-based cleaning products, polishing or cleaning compound, hard-bristle brushes or electric polishing equipment. Use only clean, nick-free tools and wipe gently.

- If there is dust and grit, wipe it off with a soft, damp cloth.
- If it is soiled, but not gritty, use water and soft cloth.
- If there is heavier soil, use a solution of mild liquid detergent and water at +70° to +80°C, then use clear water. Wipe gently with a soft cloth.
- If there are difficult stains, spot clean with 70/30 IPA (70% Isopropyl Alcohol/ 30% Water) cleaning solution citrus cleaner.



Type of Surface Damage	Appearance of Surface Damage	Method to Reduce Visibility
Mar	Dragging an item, such as a colored briefcase, across the film and leaving a deposit of color on the surface.	Rub with a soft cloth and warm soapy water to remove the mar.
Indentation	Pressing into the film surface without breaking the surface, such as pressure from a chair.	Carefully heat the indentation with a heat gun, which allows the film surface to rebound and reduce visibility.
Scratch	Scratching the surface layer of film leaving a whitish mark on the surface, such as by dragging a sharp rivet from a purse.	Rub with a soft cloth to remove scratch debris.
Gouge	Breaking through the entire film, such as severe impact from sharp chairs or carts.	Repair by cutting out the damaged film and replacing that piece with the same pattern of film or remove and replace an entire panel of film.

## Surface finishes that are easy to clean and disinfect

Keeping your surfaces clean and properly disinfected is more important than ever. 3M™ DI-NOC™ Architectural Finishes can be easily cleaned and disinfected for added peace of mind without deterioration of the surface finish. Just like stainless steel and other hard, non-porous surfaces, these 3M™ DI-NOC™ Architectural Finishes are durable and compatible with many traditional commercial disinfectant cleaners.

3M™ DI-NOC™ Architectural Finishes PS Series have antibacterial preservatives which are added to protect the products from degradation from microbes such as mould and fungus.

Ideal application will be doors, walls, cabinets, front desks and other surfaces in high-traffic zones.

3M™ DI-NOC™ Architectural Finishes is removable with heat from supported substrates within the Expected Performance Life.

#### **LEEDv4 Credits**

This section describes some of the options for acquiring LEED credits using 3M<sup>™</sup> DI-NOC<sup>™</sup> 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 acquired.

## 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 and V1.2-2017.

#### **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 and V1.2-2017).



## **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 (US) or 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.

#### Shelf Life, Storage and Shipping

The shelf life as defined below remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty.

The shelf life is never more than 2 years from the date of manufacture on the original box.

Storage conditions: +4°C to +35°C, out of sunlight, original container in clean and dry area.

#### **Health and Safety**

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information.

Follow the link to obtain SDS sheets for 3M products on 3M.com/SDS.

IMPORTANT! When using any equipment, always follow the manufacturer's instructions for safe operation.

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