



# 3M™ DI-NOC™ Architectural Finishes

## Standard Constructions

### Product Bulletin

#### Product Description

3M™ DI-NOC™ Architectural Finishes are flexible PVC films with Comply™ adhesive intended to cover all type of the surfaces, such as wall covering, furniture, fixture, ceiling, doors, elevators and exterior/interior applications.

3M™ DI-NOC™ Architectural Finishes are durable, dimensionally stable, vinyl films that were specifically developed for interior/exterior decorations and refurbishment.

3M™ DI-NOC™ Architectural Finishes are CE marked according the Construction Products Directive 89/106 /EEC and tested according to the EN 15102: 2008 Decorative wall covering.

For performance characteristics please see the referring Declaration of Conformity by comparing the listed design series with our product catalogue.

3M™ Comply™ are air release channels allowing fast and easy, bubble-free application of films.

#### Product Line

AE (abstract earth)	MW (metallic wood)
BW (big wave)	NU (nuno)
CA (carbon)	PA (metallic)
CH (cross hairline)	PC (sand)
CN (concrete)	PS (single color)
FA/PT/SE (abstract soft)	RS (random squares)
FE (weave)	RS (random style)
FW (fine wood)	RT/PG/LZ (abstract hard)
HG (high gloss)	SE (stucco)
HS (hide seek)	SI (silk)
LE (leather)	ST (stone)
LW (little wave)	TE (tech fiber)
ME/VM (metallic)	WG (wood grain)

#### Product Characteristics

These are typical values for unprocessed products.

Contact your 3M representative for a custom specification.

#### Physical & Application

Material	PVC
Surface finish	depends on design
Thickness (film)	210 µm - 220 µm (varies between film constructions)
Adhesive type	acrylic
Liner	Polyethylene coated paper
Adhesion	approx. N/25 mm

FTM 1: 180° peel, substrate: glass; cond: 24 h  
23°C/50%RH

Substrate	Adhesion
Lauan Veneer	4.9
China Veneer	4.9
Asbestos Slate Board	4.9
Melamine Baked Steel Sheet	30.4
Phosphate-coated Steel Sheet	24.5
PVC-coated Steel Sheet	44.1
Aluminum	29.1
Stainless Steel Sheet	37.2
Acrylic Board	38.2
Mortar	3.9

Application method	dry only!	
Applied shrinkage	< 0.4 mm	FTM 14
Application temperature	+12°C	for flat surfaces (minimum air and substrate)
Surface type	flat to simple curved, moderate compound curves and 3D shapes depending on product pattern	
Substrate type	metal, wood and plastic material, see section Primer below for more details	
Film removal	Removable with heat from supported substrates.	
	No liability is given for ease or speed of removal of any graphic. Pay attention to adequate air and substrate temperature.	

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

Chemical Agent	Exposure Time	Result
Heptane	5 hours	No
Ethyl alcohol	5 hours	No
Water	7 days	No
Salt Spray (5%, 43°C)	7 days	No
Methyl Ethyl Ketone (MEK)	10 minutes	Severe attack
Xylene	20 minutes	Severe attack

**Stain resistance** 3M DI-NOC product applied to an aluminum panel and placed in direct contact with the following substances at 20°C, 65%RH.

**Substances** Milk, coffee, wine, lemon juice, tea, sodium hydroxide (10%), soybean oil, salt water (1%), household ammonia, soapy water (1%), synthetic detergent, hydrochloric acid (10%), vinegar.  
Test result: No effect

**Storage** Shelf life Use within two years from the date of manufacture on the sealed original box.  
Use within one year after opening the box.

Storage conditions +4° to +35°C, out of sunlight, original container in clean and dry area, on at least a 3" core with the film facing outward

**Flammability** According to DIN EN 13501-1 (DIN EN ISO 13823).

Flammability standards are different from country to country. Ask your local 3M contact for details, please.

**Primer** Generally, on flat surfaces primer is not required. Only if the surface energy of the substrate is low or on critical surfaces with sharp radius, edges where 3M DI-NOC is stretched, primers can be used. For high surfaces energy substrates such as metal or paint no primer is required. Primer is required at any overlaps of the film, i.e. underneath the butt joint and wherever the material is stretched, see overview of primers below:

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

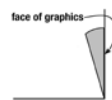
**Warranty** This warranty does not apply to film problems caused by defective application.

Climatic zones Effective performance life of DI-NOC Architectural Finishes 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 types

Vertical:



The face of the graphic is  $\pm 10^\circ$  from vertical.

Interior: Interior means an application inside a building without direct exposure to sunlight.

**Vertical outdoor exposure**

only for films which have the outdoor recommendations

**Zone 1**

5 years

**Zone 2**

4 years

**Zone 3**

3 years

**Interior application**

interior

**Zone 1**

12 years

**Zone 2**

12 years

**Zone 3**

12 years

**Effective Performance Life** 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. Application performance statements are based upon representative values obtained from testing throughout Japan/Europe. However, actual performance will be determined by substrate selection and preparation, exposure conditions and maintenance of the marking.

Horizontal application of markings and stripping can be used for indoor decoration where no UV light is exposed. 3M does not recommend/warrant horizontal outdoor application of 3M DI-NOC Architectural Finishes products as horizontal applications are subjected to maximum sunlight and environmental effects. Therefore, color change, loss of gloss and chalking may occur.

Also 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 overlamine.

**Limitations of End Uses** 3M specifically does not recommend or warrant the following uses, but please contact us to discuss your needs to recommend other products.

- |                   |   |
|-------------------|---|
| Film applied to   | - surfaces that are not clean and smooth.<br>- surfaces with poor paint to substrate adhesion.    |
| Film removal from | - signs or existing graphics that must remain intact.   |
| Film subjected to | - gasoline vapors or spills.  |
| Important Notice  | - 3M Commercial Solutions products are not tested against automotive manufacturer specifications! |

**Converting Information** 3M DI-NOC Architectural Finishes is normally applied in sheets directly from the roll. In case people want to cut or screen-print that is possible but not the primary intention of the film.

**Electronic Cutting** The variable characteristics of electronically controlled cutting equipment require users to verify their specific requirements.

The film is not designed for the purpose of e-cutting and not warranted, however, should you wish to electrocut this material 3M would advise the following:

Sharpness of knife blade Dull blades impart a serrated look to the edge of the cut film. Ensure the blades are always sharp.

Weight of knife blade The ideal weight slightly scores the liner. Too little weight does not cut completely through the film and the adhesive. Excessive weight cuts the liner and causes the blade to drag, accelerating wear and creating a serrated cut edge on the film.

Avoid cutting sharp corners as these can tear during the application process.

Test any application tape used to ensure that this does not cause the film layers to separate during installation.

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

**Note:** 3M DI-NOC is not treated with antistatic charges.

When weeding check removability of small pieces. Being a multilayer film, separation can occur when weeding. This may increase weeding time on small parts.

Temperature and relative humidity Temperature and relative humidity are minor considerations, but avoid extreme or rapid fluctuating conditions.

Roll storage Store the film in the same environment as the cutting equipment.

Further information For more details refer to our instruction bulletin 4.1 'Sheeting, Scoring, Film Cutting', please.

[>Instruction Bulletin 4.1'Sheeting, Scoring, Film cutting'<](#)

## **Converting Information Screen Printing / Digital Printing**

Whilst 3M DI-NOC Series PS can be screen printed or PIJ printed, other products such as the Controltac™ series of films, for example, are more suitable for this process.

Screen printing or PIJ printing is not warranted, however, should you wish to print DI-NOC 3M recommends to use 3M™ Screen Printing Inks Series 1900 or PIJ printing systems such as UV, solvent or latex based inks.

To protect the graphic 3M recommends to clear coat using 3M™ Screen Print Dirt Resistant Gloss Clear 1920DR or laminate with 3M™ Scotchcal™ Luster Overlamine 8519 3M™ Scotchcal™ Matte Overlamine 8520.

The 4-color half tone printing is neither recommended nor warranted.

## **Application**

3M™ SCPS-55 is recommended for prespacing of cut letters.

3M recommends applying DI-NOC products at +12°C to +38°C.  
The application method must be dry only due to Comply™ adhesive.

## **Preparation of Substrates**

Refer to Instruction Bulletin DI-NOC for general application information.

>Instruction Bulletin DI-NOC A Guide for Interior and Exterior Dry Application<

## **Maintenance and Cleaning**

For cleaning of applied 3M DI-NOC Architectural Finishes use a soft textile with detergent and water. Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline).  
For heavy dirt accumulation use detergent and water at +70°C to +80°C.

## **Remarks**

This bulletin provides technical information only.

Important notice 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.  
Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

## **Additional Information**

Visit the web site of your local subsidiary at [www.3Mgraphics.com](http://www.3Mgraphics.com) for getting:  
- additional instruction bulletins  
- a complete product overview about materials 3M is offering



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