

Architectural Fusions Care & Maintenance

Includes Altyno, Belbien, Di-Noc, Reatec & LX (LG) Interior Films

In most all cases, the stains can be easily cleaned off by using a non-abrasive household cleaner such as dishwashing liquid. In other cases, a solution of denatured alcohol will generally remove the stain. For severe stains, it is possible to use lacquer thinner or acetone in some instances.

Note: It is highly advisable to test any strong solvent's compatibility with the fusion in an inconspicuous area prior to applying the solvent to a visible area. Read the following topics for solvent resistance. **It is important to refrain from using abrasive cleaners on any vinyl fusion because it could damage the surface.**

Custom Printed Graphic Architectural Fusions

It is recommended to clean printed films with a damp rag using water. If a cleaning solution is needed, a non-abrasive cleaner such as Windex or dishwashing liquid should be used. **Use of harsh or abrasive chemicals such as denatured alcohol may damage the printed image.**

Solvent Resistance

The exterior series is more resistant to strong solvents than the Interior series. This is because of an anti-corrosive film layer that is incorporated with the exterior series.

The anti-corrosive film layer is comparable in nature to the makeup of fluoride or Teflon. However, it is important to refrain from making a "direct comparison" because they are somewhat different.

The following solvents were exposed to the exterior series and appreciable change was observed.

- Toluene
- MEK (Methyl Ethyl Ketone)
- Acetone

**If you have any questions regarding care or maintenance of the Fusions product,
please contact Surfacequest Solutions at 952-835-2880**



Product Description

3M™ DI-NOC™ Architectural Finishes are decorative surface finishes for interior applications, available in over 1000 designs. 3M™ DI-NOC™ designs offer the warmth of wood grain, sleek feel of metal, cool essence of natural stone, pure color, and hundreds of other designs. The MT Matte Series has a new state-of-the-art matte surface, offering realistic texture and appearance of natural materials and rich, solid colors.

i IMPORTANT NOTE

Please refer to the 3M™ DI-NOC™ Installation Guide for additional information.

Featured Benefits of DI-NOC Architectural Finishes

- Interior Applications — Ideal for walls, columns, doors, cabinets, and more.
- Application Surfaces — Use on metal, wood, glass and complex curved (3D) surfaces.
- Aesthetics — New Controlled Reflection Technology gives Premium Wood Series the realistic appearance and texture of natural wood. The controlled reflection of the matte coating technology is combined with both fine and deep wood grain texture and high-quality printing (see Figure 2)."
- Remodel and Reuse — Shortens refurbishment downtime and brings entirely new designs to existing assets.
- Easy Application — 3M™ Comply™ Adhesive technology virtually eliminates bubbles, simplifying and speeding application (see Figure 1).
- Expected Performance Life is 12 years for indoor, vertical applications (see Warranty).

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 (most finishes)
	Adhesive	Pressure-sensitive acrylic, permanent
	Release Liner	Silicone-coated poly paper
Thickness	Film + Adhesive	8 mils (200 microns) nominal, not including release liner Some designs vary slightly in thickness due to embossing
	Release Liner	6.2 mils (157 microns)
Maximum Roll Size	Standard DI-NOC	48 in. X 164 ft. (1,220mm x 50m)
	WG-GN, VM, ET	48 in. x 82 ft. (1,220mm x 25m)
Maximum Weight		55 lb. (25 kg) (approx.) for a 164 ft. (50m) roll

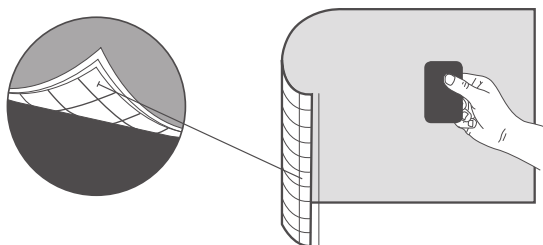


Figure 1: 3M™ Comply™ Air-Release Channels

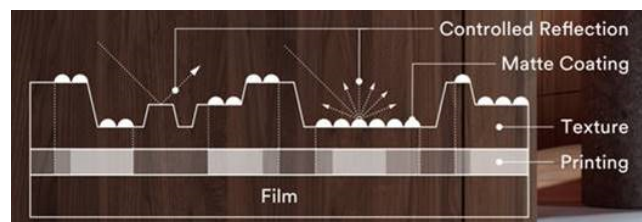


Figure 2: New Controlled Reflection Technology



Product Performance

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

Characteristic	Evaluation	Results
Dimensional Stability*	4 in. x 4 in. (100mm x 100mm) crosscut in film, after 2 days at room temperature.	Largest gap: < 0.01 in. (0.3mm)
Heat Resistance*	Aged at 150°F (65°C) for 28 days.	No delamination or visible change
Thermal Cycle Resistance*	Cycled between -22°F and 150°F (-30°C and 65°C) for 12 days.	No delamination or visible change
Moisture Resistance*	Aged at 104°F (40°C), 95% humidity for 30 days.	No delamination or visible change
Cold Impact Resistance*	2 lb. (907g) weight dropped from 5 in. (12.7cm) height, at 32°F (0°C) using a Gardner Impact Tester.	No cracks in film
Ultraviolet Light Exposure	Exposed to carbon arc accelerated UV light for 250 hours	No visible change
Wear Resistance	Taber® CS-17 Abrasion wheel: 1 Kg loading weight, 7,000 cycles	No wear-through of surface finish
Fire Resistance	When used in Interior Applications as defined by NFPA 101 "Life Safety Code", Test Method ASTM E84	Most Products have Class A
Industry-Specific Testing	IMO Certification/USCG Type Approval, Intertek Firedoor, and CAN/ULC-S102.2	Consult 3M Technical Service
VOC Emission Testing	CA Specification 01350 tested per CDPH Standard Method V1.1 and V1.2	Compliant as low-emitting

* Product applied to an aluminum plate

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	○
Cola	●
Milk	●
Red Wine	●
Ketchup	●
Soy Sauce	●
Cooking Oil	●
Vinegar	●
Mustard	●
Crayon	○
Shoe Polish	◐
Betadine iodine	●
Soap solution (1%)	●
Ammonia Solution (10%)	●
Citrate Solution (10%)	●
Ethyl Alcohol (50%)	●
Uric Acid	●

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

Product Performance (continued)

Resistance to Solvents

Film was applied to an aluminum plate, left for 24 or 72 hours, then immersed in the following chemicals:

Classification	Solvent	Immersion Time	Immersion Testing Result
Water	Water	24 hours	No visible change
Acid	Hydrochloric Acid (10%)	24 hours	No visible change
	Hydrogen Peroxide	72 hours	No visible change
Base (Alkali)	Sodium Hydroxide	24 hours	No visible change
Alcohol	Ethanol	24 hours	No visible change
	Isopropyl Alcohol	72 hours	No visible change
Ester	Ethyl Acetate	5 minutes	Deterioration observed
Ketone	Acetone	72 hours	Deterioration observed
	Methyl Ethyl Ketone	5 minutes	Deterioration observed
Aromatic	Toluene	5 minutes	Deterioration observed

Resistance to Cleaners & Disinfectants

Film was applied to an aluminum plate, left for 72 hours, then immersed in the following chemicals. For immersion testing, the sample is immersed in the cleaner or disinfectant for up to 72 hours, then rinsed with water and allowed to dry. For wipe testing, the cleaner or disinfectant is applied to the sample to simulate routine use in a healthcare setting, and then wiped off with a cloth, and repeated. Any change in the surface of the film is noted. Other cleaners and disinfectants with the same active ingredient are expected to perform similarly.

3M Cleaners and Disinfectants Tested on Standard DI-NOC		Wipe Testing Result	Immersion Time	Immersion Testing Result
3M Disinfectants currently listed by the EPA as effective against SARS-CoV-2 (COVID-19)	3M™ C. diff Solution Tablets Concentrate	No visible change	72 hours	No visible change
	3M™ HB Quat Disinfectant Cleaner Concentrate #25	No visible change	72 hours	No visible change
	3M™ MBS Disinfectant Cleaner Concentrate #42	No visible change	72 hours	No visible change
	3M™ MBS Disinfectant Cleaner Fresh Scent Concentrate #41	No visible change	72 hours	No visible change
	3M™ Neutral Quat Disinfectant Cleaner Concentrate #23	No visible change	72 hours	No visible change
	3M™ Non-Acid Disinfectant Bathroom Cleaner Concentrate #15	No visible change	72 hours	No visible change
	3M™ Quat Disinfectant Cleaner Concentrate #5	No visible change	72 hours	No visible change
	3M™ RTC Disinfectant Cleaner Concentrate #40	No visible change	72 hours	No visible change
	3M™ TB Quat Disinfectant Cleaner Ready-To-Use	No visible change	72 hours	No visible change
Other 3M™ Cleaners & Disinfectants	3M™ Acid Bowl Cleaner RTU	No visible change	72 hours	No visible change
	3M™ Bathroom Cleaner Concentrate #44	No visible change	72 hours	No visible change
	3M™ Bathroom Disinfectant Cleaner Concentrate #4	No visible change	72 hours	No visible change
	3M™ Bathroom and Shower Cleaner Concentrate #51	No visible change	72 hours	No visible change
	3M™ Crème Cleanser Ready to Use	No visible change	72 hours	No visible change

3M™ DI-NOC™ Architectural Finishes

Other 3M™ Cleaners & Disinfectants	3M™ Deodorizer- Country Day Scent Concentrate #12	No visible change	72 hours	No visible change
	3M™ Deodorizer- Fresh Scent- Concentrate #13	No visible change	72 hours	No visible change
	3M™ Deodorizer- Mountain Spice- Concentrate #14	No visible change	72 hours	No visible change
	3M™ Enzyme Digester Ready to Use	No visible change	72 hours	No visible change
	3M™ 3-in-1 Floor Cleaner Concentrate #24	No visible change	72 hours	No visible change
	3M™ Floor Stripper LO Concentrate #22	No visible change	72 hours	No visible change
	3M™ Food Service Degreaser Concentrate #7	No visible change	72 hours	No visible change
	3M™ General Purpose Cleaner Concentrate #8	No visible change	72 hours	No visible change
	3M™ Glass Cleaner Concentrate #1	No visible change	72 hours	No visible change
	3M™ Glass Cleaner and Protector Concentrate #17	No visible change	72 hours	No visible change
	3M™ Gum Remover Ready to Use	No visible change	72 hours	No visible change
	3M™ Heavy Duty Degreaser Gallon: Concentrate	No visible change	72 hours	No visible change
	3M™ Heavy Duty Glass Cleaner Concentrate #20	No visible change	72 hours	No visible change
	3M™ Heavy Duty Multi-Surface Cleaner Concentrate #2	No visible change	72 hours	No visible change
	3M™ Industrial Degreaser Concentrate #26	No visible change	72 hours	No visible change
	3M™ Liquid Stainless Steel Cleaner and Polish Ready to Use	No visible change	72 hours	No visible change
	3M™ Neutral Cleaner Concentrate #33	No visible change	72 hours	No visible change
	3M™ Neutral Cleaner LO Concentrate #3	No visible change	72 hours	No visible change
	3M™ Non-Acid Bathroom Cleaner Concentrate #15	No visible change	72 hours	No visible change
	3M™ Peroxide Cleaner Concentrate #34	No visible change	72 hours	No visible change
	Scotchgard™ Bonnet Cleaner Concentrate #11	No visible change	72 hours	No visible change
	Scotchgard™ Extraction Cleaner Concentrate #27	No visible change	72 hours	No visible change
	Scotchgard™ Pretreatment Cleaner Concentrate #28	No visible change	72 hours	No visible change
	3M™ Sanitizer Concentrate #16	No visible change	72 hours	No visible change
	3M™ Sharpshooter™	No visible change	72 hours	No visible change
	3M™ Speed Stripper Concentrate #6	No visible change	72 hours	No visible change
	3M™ Stainless Steel Cleaner and Protector Ready to Use	No visible change	72 hours	No visible change
	3M™ Tile, Grout, & Bowl Cleaner Concentrate #52	No visible change	72 hours	No visible change
	3M™ Troubleshooter™ Finish Remover Concentrate	No visible change	72 hours	No visible change
	3M™ Troubleshooter™ Liquid Finish Remover Ready to Use #21	No visible change	72 hours	No visible change

Cleaners & Disinfectants Tested on Standard DI-NOC	Immersion Time	Immersion Result	
Other Cleaners & Disinfectants	Accel® TB Disinfecting wipes	72 hours	No visible change
	Asepticare™ TB+II	72 hours	No visible change
	Birex® Disinfectant	72 hours	No visible change
	Bleach-Rite® Disinfectant	72 hours	No visible change
	Caltech Precise® hospital cleaner	72 hours	No visible change
	2 in 1 Carbona® cleaner	72 hours	No visible change
	CaviWipes™	72 hours	No visible change
	Cidex® OPA	72 hours	No visible change
	Citrace® Germicide	72 hours	No visible change
	Citrace® II hospital germicidal deodorizing cleaner	72 hours	No visible change
	Clorox® Bleach - 50% bleach/50% water	72 hours	No visible change
	Clorox® Broad Spectrum Quaternary Disinfectant	72 hours	No visible change
	Clorox® germicidal bleach spray with bleach	72 hours	No visible change
	Discide® Ultra disinfectant spray	72 hours	No visible change
	Ecolab® TB disinfectant cleaner	72 hours	No visible change
	Enviroid® Disinfectant decontaminating cleaner	72 hours	No visible change
	Fade-A-Dyne® blood remover	72 hours	No visible change
	Fantastik® Spray Cleaner	72 hours	No visible change
	Formula 409®	72 hours	No visible change
	Guardman® AFTA	72 hours	No visible change
	Harvard Chemical 625® hospital grade neutral disinfectant	72 hours	No visible change
	Healthlink Citriguard® II Hard Surface Cleaner	72 hours	No visible change
	Husky® 891	72 hours	No visible change
	Ivory® Ultra	72 hours	No visible change
	K2R®	72 hours	No visible change
	Lysol® Disinfectant Spray	72 hours	No visible change
	Microquant® Quaternary detergent disinfectant - Ecolab	72 hours	No visible change
	Misty disinfectant & deodorant	72 hours	No visible change
	Oxivir® TB - Diversey	72 hours	No visible change
	Oxivir® TB ready to use wipes - Diversey	72 hours	No visible change
Oxivir® TB Wipes - Diversey	72 hours	No visible change	
QD-64® lemon Disinfectant - Quest	72 hours	No visible change	
Quest 256® Neutral Disinfectant - Butchers	72 hours	No visible change	
Resolve® Spot & Stain cleaner	72 hours	No visible change	

Other Cleaners & Disinfectants	SaniZide Plus® germicidal solution	72 hours	No visible change
	SaniZide Plus® germicidal wipes	72 hours	No visible change
	Simply Green®	72 hours	No visible change
	Spartan® Clean by Peroxy®	72 hours	No visible change
	Spartan® Green Solutions® Neutral Disinfectant cleaner	72 hours	No visible change
	Spray Nine®	72 hours	No visible change
	TechniSat® TX1067 (70/30 IPA)	72 hours	No visible change
	Tide™ Powder Detergent	72 hours	No visible change
	Virex® 256 cleaner	72 hours	No visible change
	Virox®	72 hours	No visible change

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

Be sure you understand the unique characteristics of these Products and consider them in determining whether the Product is suitable for your use. Please refer to the 3M™ DI-NOC™ Installation Guide for additional information.

- Substrate texture affects Product adhesion and application ease.
 - Unless the substrate is very smooth, its texture may be visible through the Product.
 - Compounds used to smooth a textured substrate permanently change that substrate.
 - Product removal may damage the substrate or its finish.
- Application surface conditions affect Product adhesion.
 - Ensure that the existing paint, surface finish, or wall covering has excellent bond to the substrate area where the Product will be applied.
 - Repair, prime and paint the substrate, as needed.
 - An adhesion promoter may be required to increase Product adhesion.
- Human and environmental conditions
 - Temperature and humidity in recommended range
 - Direct UV light (sunlight)
 - Heating or cooling ducts in close proximity.
 - Unsealed substrates in front of water sources.
 - People or equipment that will be in contact with the Product.
- The Product may contain a splice. The location of the splices is marked with a tab along the edge of the Product. The installer will need to determine the impact of the splice and work around it to make the best use of the material layout.

Factors That Affect Performance Life

The actual performance life of the Product is affected by:

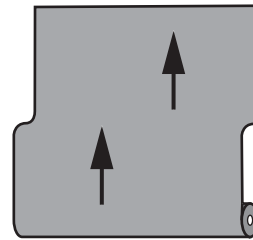
- selection, condition and preparation of the application surface.
- application surface texture.
- application technique.
- angle and direction of sun exposure.
- environmental conditions.
- cleaning or maintenance methods.

Horizontal Print Series

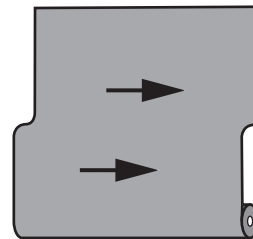
3M™ DI-NOC™ Architectural Finishes Fine Wood (FW) and Wood Grain (WG) Series include horizontal pattern options, which simplify the use of horizontal wood grains by changing the print direction. A product number ending in “H” indicates horizontal grain direction. The following horizontal patterns have a corresponding vertical match.

Horizontal	Vertical
FW-606H	FW-1134
FW-607H	FW-1133
FW-608H	FW-1123
FW-609H	FW-1113
FW-1039H	FW-1124
FW-1040H	FW-1137
FW-1121H	FW-1022
FW-1130H	FW-1129
FW-1136H	FW-1135
FW-1139H	FW-1138
FW-1145H	FW-1143
WG-1392H	WG-2705

Printing direction = Direction of the wood grain length

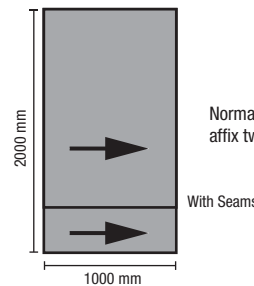


Vertical Print Series
Wood grain patterns of vertical print series: horizontal to the length

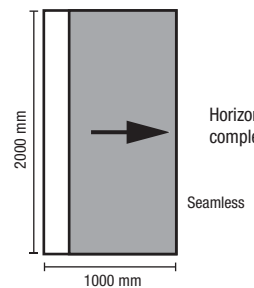


Horizontal Print Series
Wood grain patterns of horizontal print series: vertical to the length

Affixing a horizontal pattern film on a door




Normal wood grain patterns:
affix twice for one door.



Horizontal print series wood grain patterns:
complete by affixing once.

Considerations for Design Selection by Product Series

Use the following table to ensure the selected design can be successfully applied. See the 3M™ DI-NOC™ Installation Guide for additional information.

- 1 - **Texture of Application Surface:** Application surface texture may be visible through the film. Apply film to very smooth and clean application surfaces.
- 2 - **Damage to Film Surface:** Surface of film may be damaged during application. Apply film with a squeegee wrapped in a new soft cloth, or covered in 3M™ PTFE Film Tape 5480. Not recommended for high traffic areas.
- 3 - **Printed/Embossed Pattern Match at Double-cut Seams:** Printed and embossed pattern pitches may appear random or not aligned at seams. Prior to application, confirm that appearance at seams is acceptable, or avoid double-cut seam applications and consider using reveals or joint separations.
- 4 - **Reflection of Pattern at Double-cut Seams:** Reflected color differences may be visible at seams due to the directional light reflection from the embossed surface of the film. Prior to application, confirm that appearance at seams is acceptable, or avoid double-cut seam applications and consider using reveals or joint separations. If double-cut seams are used, apply each panel in the same direction.
- 5 - **Lighting Environment After Application:** Small scratches and unevenness may be visible on the surface due to the light illumination of the film, such as under down lighting or spotlights.
- 6 -  **Not recommended for use on 3D compound curved surfaces:** Film may distort or not conform around compound curves.

Product Series	Texture of Application Surface ¹	Damage to Film Surface ²	Printed/Embossed Pattern Match at Double-cut Seams ³	Reflection of Pattern at Double-cut Seams ⁴	Lighting Environment After Application ⁵	Not Recommended On Compound Curved Surfaces ⁶	Notes
PW Premium Wood Series		●					<ul style="list-style-type: none"> Handle with care during installation to prevent damage to product.
MT & DW Matte Multiple Series	●	●		●	●		<ul style="list-style-type: none"> Handle with care during installation to prevent damage to product. Carefully make double-cut seams with a sharp blade because the seam may be more noticeable for dark colors.
AE Mortar/Industrial			●	●			
AM Advanced Metallic	●		●	●	●	●	<ul style="list-style-type: none"> Do not use on compound curved surfaces. Film may bubble if applied to plastic substrates that outgas. Do not crease or dent the film during application. Do not attempt to reposition the film during application, which can cause the film to separate from the adhesive.
BW Entertainment	●	●	●	●		●	<ul style="list-style-type: none"> Do not crease or dent the film during application. Not recommended for compound curved surfaces due to distortion of textured surface.
CA Carbon	●	●	●	●			<ul style="list-style-type: none"> Do not crease or dent the film during application.
CH Metallic Hairline	●		●	●			
CN Concrete			●	●			
ET Effect	●		●	●			
FA Multiple Series			●	●			<ul style="list-style-type: none"> Only for FA-592, FA-1094, FA-1156, FA-1161, FA-1163, FA-1164, FA-1166, FA-1167, FA-1530, FA-1531
FE Metal Leaf/Textile			●	● FE-1/33		●	<ul style="list-style-type: none"> Not recommended for compound curved surfaces due to distortion of textured surface.
FW Fine Wood			● FW-7/91, etc.	●			<ul style="list-style-type: none"> Some patterns are large scale, and may not match at seams; view full pattern width image at 3m.com/AMD.

3M™ DI-NOC™ Architectural Finishes

Product Series	Texture of Application Surface ¹	Damage to Film Surface ²	Printed/ Embossed Pattern Match at Double-cut Seams ³	Reflection of Pattern at Double-cut Seams ⁴	Lighting Environment After Application ⁵	Not Recommended On Compound Curved Surfaces ⁶	Notes
FW-H Fine Wood WG-H Wood Grain Horizontal Patterns			●				See Horizontal Print Series section
HG High Gloss and WH-111 Whiteboard	●	●			●	●	<ul style="list-style-type: none"> Do not use on compound curved surfaces. Film may bubble if applied to plastic substrates that outgas. Do not crease or dent the film during application. Do not stretch or attempt to reposition the film during application, which may deform, buckle or ripple the film. Seams will be visible when using a double-cut seam due to glossy film.
HS Mono Contrast		● HS-1657 HS-1658	●				●
LE Leather		● LE-1226, LE-1227, LE-1228, LE-1229, LE-1230, LE-1231 LE-1551 LE-1552		● LE-1171	● LE-1171	● LE-1552	<ul style="list-style-type: none"> For LE-1552 only: not recommended for compound curved surfaces due to distortion of textured surface.
LW Entertainment	●	●	●	●			<ul style="list-style-type: none"> Do not crease or dent the film during application.
ME, PA Metallic	●			●			
MW Metallic Wood	●	●					
NU Nuno/Textile			●	● NU-1795 NU-1796 NU-1797		● NU-1604 NU-1605	<ul style="list-style-type: none"> Not recommended for compound curved surfaces due to distortion of textured surface.
PC Sand				●			
PS Single Color		● PS-1183		●			<ul style="list-style-type: none"> For comment 4 only: PS-107, PS-110, PS-140, PS-292, PS-293, PS-294, PS-504, PS-668, PS-885, PS-948, PS-992, PS-1005
RS Entertainment	●	●	●			●	<ul style="list-style-type: none"> Do not crease or dent the film during application. Not recommended for compound curved surfaces due to distortion of textured surface.
RT Aged Metal			●	●			●
SE Abstract		●					
SI Silk			●	●	●		<ul style="list-style-type: none"> The texture of this pattern has a grain: apply each sheet in the same direction and use a double-cut seam.
ST Stone			●				<ul style="list-style-type: none"> Only for ST-1195, ST-1586, ST-1587, ST-1588, ST-1831
TE Advanced Metallic	●	●	●	●			<ul style="list-style-type: none"> Do not crease or dent the film during application.

3M™ DI-NOC™ Architectural Finishes

Product Series	Texture of Application Surface ¹	Damage to Film Surface ²	Printed/ Embossed Pattern Match at Double-cut Seams ³	Reflection of Pattern at Double-cut Seams ⁴	Lighting Environment After Application ⁵	Not Recommended On Compound Curved Surfaces ⁶	Notes
VM Metallic	●		● VM-1691 and similar		●	●	<ul style="list-style-type: none"> Do not use on compound curved surfaces. Film may bubble if applied to plastic substrates that outgas. Do not crease or dent the film during application. Do not attempt to reposition the film during application, which can cause the film to separate from the adhesive.
WG Wood Grain			● WG-1070 WG-1071	● WG-1812			
Wiping Wood Grain WG-156 WG-157 WG-159 WG-166			●				<ul style="list-style-type: none"> The film surface has a special treatment. Do not use double-cut seams. Apply with reveals or joint separations.
WG-GN Wood Grain Gloss	●	●			●		<ul style="list-style-type: none"> Avoid using abrasive clothes and organic solvents to clean.

Application and Removal Guidelines

The values in these tables are typical, and are based on test data deemed reliable but are not warranted. See the *3M™ DI-NOC™ Installation Guide* for additional information.

Characteristic	Value
Application Surface Type	Smooth, hard, non-porous (sealed) material
Application Location	Interior
Application Temperature	54°F - 100°F (12°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, or large changes in humidity occur.
Product Removal	Heat at 176°-212°F (80°-100°C)

Adhesion Compatibility with Application Surfaces

The following table contains peel adhesion information for the Product peeled from various surfaces. A number of surfaces have acceptable adhesion without the use of adhesion promoter. Examples of increased adhesion with adhesion promoters on certain surfaces is presented. Surfaces vary widely, so adhesion should be assessed for each customer substrate. Some surfaces are porous and must be sealed before application of 3M™ DI-NOC™ to prevent outgassing of the surface over time.

Test specimens were applied to the substrate and conditioned at 68°F (20°C) for 48 hours, then peel tested at 180 degrees at a tensile speed of 12 inches (300 mm) per minute.

Substrate	Application Surface	Adhesion Promoter		
		NO ADHESION PROMOTER lb./in. (N/25mm)	WP-2000 (water-based) lb./in. (N/25mm)	3M™ Tape Primer 94 (solvent-based) lb./in. (N/25mm)
Wood	MDF (w/ sealer)	● 2 (8) ³	● 11 (51)	● 4 (18)
	Painted MDF	● 4 (20)	● 12 (52)	● 7 (31)
Boards	Gypsum Board (w/ skim coat & sealer)	● 2 (8) ³	● 8 (35)	● 4 (19)
Metals	Aluminum	● 11 (47)	● 11 (48)	● 11 (47)
	Anodized Aluminum	● 5 (23)	● 13 (56)	● 11 (49)
	Stainless Steel	● 6 (26)	● 13 (56)	● 6 (28)
Glass	Glass	● 6 (26)	● 13 (58)	● 6 (26)
Plastics ¹	ABS	● 6 (28)	● 13 (56)	● 10 (44)
	Acrylic	● 5 (22)	● 12 (54)	● 10 (43)
	Polyester (PETG)	● 7 (29)	● 11 (51)	● 10 (45)
	Polypropylene	○ 1 (2)	● 4 (17)	● 4 (20)
	Polyethylene	○ 1 (3)	● 5 (21)	○ 1 (3)
	Polycarbonate	● 6 (28)	● 12 (53)	● 10 (44)
	DI-NOC™ Film	● 5 (24) ²	● 11 (49)	● 9 (42)

WP-2000 undiluted for testing

- Acceptable adhesion
- Fails in adhesion

¹ Bubbles may appear under film due to outgassing if plastic substrate is not fully cured before application.

² If DI-NOC™ is wrapped and overlapped around edges, use of an adhesion promoter is highly recommended due to additional stress from wrapping DI-NOC™.

³ Sealer was wiped with Isopropyl alcohol to improve adhesion. Adhesion was tested using a spring scale per the DI-NOC Installation Guide and passed at 800-1000 g/in.

Processing Options

Processing of the Product is on a user test and approve basis only. The user is responsible for results in all processing applications.

Printing

The Products are not designed for surface printing and have various surface textures. Printing is on a user test and approve basis only. No warranty is made for the quality or durability of printed Product.

Cutting

Electronic cutting, weeding and application tape with the Product must be used only on a user test and approve basis. The user should consider the following: (1) the type of liner used for the Product is not intended for electronic cutting; (2) there is currently no recommended application tape that adheres properly to the face of the Product to hold cut shapes in place.

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

Cleaning and Maintenance

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.

Problem	Solution
Dust and grit	Wipe with a soft, damp cloth.
Soiled (but not gritty)	Use water and a soft cloth
Heavily Soiled	Clean first using a solution of mild liquid detergent and water, then use clear water. Wipe gently with a soft cloth.
Difficult Stains	Spot clean with 70/30 IPA (70% Isopropyl Alcohol/ 30% Water) cleaning solution

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	Breaking the surface layer of film leaving a slightly jagged whitish mark on the surface, such as by dragging a sharp rivet from a purse.	Rub with a surface restorer such as 3M™ Marine Vinyl Cleaner & Restorer to reduce the visibility of scratches.
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.

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, 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.

WARNING

To reduce the risks of personal injury and/or property damage associated with glass breakage:

A glass surface covered by a film with areas of high opacity or dark-colored ink will absorb more heat than other glass surfaces when exposed to sunlight. Heat absorption can create thermal expansion that could result in glass breakage or cracking. Do not use a film with areas of high opacity or dark-colored ink on glass surfaces with significant exposure to sunlight.

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 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.

Proposition 65

This Product is developed and commercialized for the purposes of industrial and commercial uses only; therefore, it is not evaluated for compliance with any local, regional, or global consumer regulations. Certain chemicals of this Product are listed by OEHHA for California Proposition 65 under the Safe Drinking Water and Toxic Enforcement Act of 1986.

WARRANTY

Product

3M™ DI-NOC™ Architectural Finishes (the “Product(s)”) are decorative films for use only in interior applications in commercial buildings (“Interior Applications”).

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”) on the date 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 Product installation date.
The Product will have no significant discoloration, cracking or other similar visual defects for the applicable time period below:

Application	Warranty Period
Interior Applications	10 years ¹
Exterior Applications	Use 3M™ DI-NOC™ EX Series Product ²

1 - Except VM, AM, and HG have 5 years interior warranty period.

2 - See 3M™ DI-NOC™ EX Series Tech Datasheet for exterior warranty. Exterior applications of standard DI-NOC are 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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