



3M™ DI-NOC™ Architectural Finishes AR Series

Description

Advantages

- 3M™ DI-NOC™ Architectural Finishes AR Series are flexible cast PVC films with Comply™ adhesive intended to cover all type of the surfaces, such as wall covering, furniture, fixture, doors, elevators interior applications.
- 3M DI-NOC Architectural Finishes AR Series are durable, dimensionally stable, vinyl films that were specifically developed for interior decorations and refurbishment where scratch resistance is necessary e.g. tables; counter desks aso.

Product Line

AR-1115; AR-1116; AR-1117; AR-1118; AR-1119; AR-1120

Construction

- Film – approx. 215 microns (film/adhesive) PVC, cadmium-free. Thickness will vary between designs.
- Adhesive – Permanent acrylic adhesive with Comply™ performance
- Liner – PE coated Kraft paper

Effective Performance Life

The warranty for 3M DI-NOC Architectural Finishes AR Series for interior decoration as stated here does not extend to automotive or personal vehicle applications which have to conform to OEM automotive specifications. The warranty applies to films that are exposed interior at a vertical angle (defined as +/-10°). 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. This product has been designed for interior use and not be able to use in outdoor.

Vertical Exposure

Zone 1 Northern/Central Europe

Zone 2 Mediterranean Europe

Zone 3 Middle East/North Africa

DI-NOC™	Zone 1 in years	Zone 2 in years	Zone 3 in years
With/out sun symbol, indoor but no direct UV exposure	10	8	6
With/out sun symbol, indoor but no UV expo- sure	12	12	12

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 applications 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 products as horizontal applications are subjected to maximum sunlight and environmental effects. Therefore, color change, loss of gloss and chalking may occur.

Preparation of Substrates

Refer to DI-NOC™ Instruction Bulletin.

Application Temperature

3M recommends applying 3M DI-NOC products at 15° - 38° C. Wet application of 3M DI-NOC Architectural Finishes AR Series is not recommended due to Comply™ adhesive.

Specific information: Instruction Bulletin 3M DI-NOC Architectural Finishes

Physical and Chemical Properties

Values given are typical and are not for use in specifications. If a custom specification is desired, a request should be submitted through your sales representative. The following data is given for unprinted film.

Physical Properties

Property	Metric Units
Thickness (Film + Adhesive)	0.210 mm – 0.220 mm
Elongation	> 75 %
Dimensional Stability (X-gash)	< 0.3 mm max
Abrasion Resistance Taber abrasion (1,0 kg load, CS-17)	700 cycles Slightly damages are visible
Impact Resistance (Gardner at 0°C), 2 lb X 5 inch at 4°C	No effect
Humidity Resistance at 40°C (95% RH X 7 days)	No effect
Water Resistance (40°C water X 7 days)	No effect
Stain Resistance 18 hours Milk, Coffee, Wine, Lemon juice, Tea, Vinegar, Soybean oil, Salt water (1%), Ammonium water, Soap water (1%), Synthetic detergent, Hydrochloric acid (10%), Sodium hydroxide (10%)	No effect

Adhesion after 24h climate room 23°C (N/25 mm)

Substrate	Adhesion (No Primer)	Adhesion primer 94	Adhesion WP 2000	Adhesion WP 3000
Aluminum	15N/inch	20N/inch	35N/inch	-----*
2k paint sheet	23N/inch	30N/inch	40N/inch	30N/inch
Laminated wood	17N/inch	15N/inch	15N/inch	15N/inch
DI-NOC AR to DI-NOC AR	4N/inch	5N/inch	13N/inch	---*

* not usable

aging will increase the bond except material mark with a *

Chemical Resistance

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

Test Result (tests performed in Japan by 3M Japan)

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)	3d	damaged
Xylene	3d	damaged

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

Flammability (EU tests in progress)

Information about the new 3M DI-NOC approval numbers according to various test standards

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 surface 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
Scotch mount 4297 or Primer 94 Solvent based (Generally used on low surface energy substrate)	Plywood Aluminum Painted or coated metals Films (including DI-NOC™ films)
WP-2000 Water based (can be diluted 1 part primer 2 parts water) Without diluting primer is high in viscosity	Plywood Aluminum Painted or coated metals Films (including DI-NOC™ films)
WP-3000 (for small area) Water based	Plywood Aluminum Painted or coated metals Films (including DI-NOC™ films)

Please see adhesion table to take care of possibility

Cleaning/Maintenance

For cleaning of applied 3M DI-NOC Architectural Finishes AR Series use a soft textile/sponge with detergent and water. Never use an abrasive sponge. For heavy dirt accumulation use detergent and water at 70°C - 80°C.

Removal

3M DI-NOC Architectural Finishes AR Series are removable with a heat gun at 80°C – 100°C or the Bosch steam remover PTL1 can be used.

Shelf Life, Storage, Shipping

The fabricator may store unprinted film for a period of up to two years. Film and markings must be stored in a clean area, free from excessive moisture and direct sunlight, on at least a 3" core with the film facing outward, with ambient temperatures of 35°C or less.

Important Notice

This bulletin provides technical information only. 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.

3M Related Literature

Listed below is related 3M technical literature that may be of interest.

Instruction Bulletins	Bulletin No.
Design of Markings	2.1
Surface Preparation Non-vehicular	5.1
Vehicular	5.26
Application	5.5, 5.41
Storage, Maintenance and Re- moval	6.5

For Further Assistance

For help on specific questions relating to 3M DI-NOC Architectural Finishes or any other Commercial Graphics Division products, contact your local Technical Service representative or

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