SECTION 09 70 00

ARCHITECTURAL FINISHES

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\*\* NOTE TO SPECIFIER \*\* 3M Commercial Solutions; architectural finish films.  
This section is based on the products of 3M Commercial Solutions, which is located at:  
3M Center Bldg. 223  
St. Paul, MN 55144-1000  
Toll Free Tel: 888-650-3497  
Tel: 651-737-1081  
Fax: 651-737-8241  
Email: [request info (apeters2@mmm.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=3M+Commercial+Solutions&coid=47922&rep=&fax=651-737-8241&message=RE:%20Spec%20Question%20(09700mmm):%20%20&mf=)  
Web: <http://www.3m.com/3M/en_US/architectural-design-us/?utm_medium=redirect&utm_source=vanity-url&utm_campaign=www.3M.com/AMD> | <http://www.3m.com/3M/en_US/building-window-solutions-us>   
  
 [ [Click Here](https://www.arcat.com/arcatcos/cos47/arc47922.html) ] for additional information.  
  
At 3M Commercial Solutions, our watchwords are Innovate, Inspire and Inform. We are all about innovating beautiful yet practical products that meet the diverse needs of designers, architects, building owners and operators, contractors and other professionals. Our 3M DI-NOC Architectural Finishes mimic the aesthetics of natural and other materials at a fraction of the cost.  
We seek to inspire all of these stakeholders to create attractive, dynamic, enduring exteriors and interiors using materials that are as environmentally friendly as possible. And behind it all, 3M supports our customers with the information and technology they need to achieve their desired vision.

1. GENERAL
   1. SECTION INCLUDES
      1. Architectural finish films for the following exterior applications: (3M DI-NOC EX Series)
         1. Facades.
         2. Window frames.
         3. Doors.
         4. Columns.
         5. Walls.
      2. Architectural finish films for the following interior applications: (3M DI-NOC Architectural)
         1. Horizontal surfaces exposed to view.
         2. Vertical surfaces exposed to view.
         3. Semi-exposed spaces.
         4. Shaped goods.
         5. Moldings.
      3. Architectural finish films for the following interior applications: (3M DI-NOC E Series)
         1. Horizontal surfaces exposed to view.
         2. Vertical surfaces exposed to view.
         3. Semi-exposed spaces.
         4. Shaped goods.
         5. Moldings.
      4. Architectural finish films for the following interior applications:
         1. Film writing surface WH-111 (3M DI-NOC Whiteboard Film).
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06 20 00 - Finish Carpentry.
    2. Section 06 40 00 - Architectural Woodwork.
    3. Section 07 40 00 - Roofing and Siding.
    4. Section 08 41 00 - Entrances and Storefronts.
    5. Section 08 50 00 - Windows.
    6. Section 09 25 23 - Lime Based Plastering.
    7. Section 12 30 00 - Casework.
  1. REFERENCES
     1. ASTM International (ASTM): ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
     2. ASTM International (ASTM): ASTM E 308 - Standard Recommended Practice for Spectophotometry and Description of Color in CIE 1931 System.
     3. ASTM International (ASTM): ASTM E 903 - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.
     4. Underwriters Laboratories, Inc. (UL): UL 723 - Test for Surface Burning Characteristics of Building Materials.
  2. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets for products specified, including but not limited to:
        1. Performance characteristics.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Maintenance data for installed products, including precautions against harmful cleaning materials and methods.
        5. Installation Instructions.
     3. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including dimensions, anchorage, and accessories.
     4. LEED Submittals: Refer to Division 01 for requirements regarding VOC limits, recycled content, regional materials, and required documentation.
     5. Verification Samples: For each film specified, two samples, 4 inches x 4 inches (100 mm x 100 mm), representing actual architectural film colors and patterns.
  3. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Regularly engaged in the manufacture of architectural finish films.

\*\* NOTE TO SPECIFIER \*\* A list of experienced installation integrators is available from 3M Architectural Markets Department, 651-733-9853 or mhassenauer@mmm.com.

* + 1. Installer Qualifications: Installation shall be performed by a trained and qualified installer, specialized and experienced in work required for this project. A list of 3M Endorsed installers is available at 3M.com/AMD or 3M Commercial Solutions, 1-888-650-3497.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following options.

* + - 1. Mock-up area may become part of finished work.
      2. Mock-up area may not become part of finished work.
    1. Performance:
       1. Description: Faux design appearance and texture graphic film with pressure-sensitive adhesive and air release channels. Field applied application.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Film for 3M DI-NOC Architectural: Vinyl 8 mil (200 microns) thickness (thickness includes film and adhesive, excludes liner).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Film for 3M DI-NOC EX Series: Vinyl 8 mil (200 microns) thickness (thickness includes film and adhesive, excludes liner).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Film for 3M DI-NOC E Series: Polyolefin 7 mils (180 microns) thickness (thickness includes film and adhesive, excludes liner).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Film for 3M DI-NOC Whiteboard Film: Polyester 6.7 mils (170 microns) thickness (thickness includes film and adhesive, excludes liner).
      2. Liner: Silicone-coated poly paper, 6.2 mils (157 microns).
      3. Adhesive: Pressure sensitive with air release channels, as recommended by manufacturer.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Surface-Burning Characteristics for 3M DI-NOC: Per ASTM E84/UL-723:
         1. Flame-Spread Index: 25 or less, or 26-75 depending on pattern.
         2. Smoke-Developed Index: 450 or less.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Surface-Burning Characteristics for 3M DI-NOC E Series: Per ASTM E84/UL-723:
         1. Flame-Spread Index: 25 or less.
         2. Smoke-Developed Index: 450 or less.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Surface-Burning Characteristics for 3M DI-NOC EX Series: Per ASTM E84/UL-723:
         1. Flame-Spread Index: 26-75.
         2. Smoke-Developed Index: 450 or less.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Surface-Burning Characteristics for 3M DI-NOC WHITEBOARD FILM: Per ASTM E84/UL-723:
         1. Flame-Spread Index: 25 or less.
         2. Smoke-Developed Index: 450 or less.
      2. Chemical and Stain Resistance: Contaminant was in contact with the film surface and then removed using water or mild detergent. Results may vary. The following contaminants were tested: Coffee, Tea, Milk, Red Wine, Ketchup, Cooking Oil, Vinegar, Soap Solution (1%), Ammonia solution (10%), Citrate solution (10%), Ethyl Alcohol (50%).
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  2. DELIVERY, STORAGE AND HANDLING
     1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
     2. Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
     3. Store products protected from weather, temperature, and other harmful conditions as recommended by supplier. Conditions including but not limited to:
        1. 40 degrees F to 90 degrees F (4 degrees C to 32 degrees C) maximum temperature.
        2. Out of sunlight.
        3. Clean dry area.
        4. Original container.
        5. Do not stack boxes over six (6) units high. Excessive weight can damage the film
        6. Relative humidity below 80 percent.
        7. Handle products in accordance with manufacturer's instructions.
        8. Total Pre-installation Shelf Life: Apply within 2 years of date of purchase.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
        1. Acceptable Temperature Range: 54 degrees F to 100 degrees F (12 degrees C to 38 degrees C).
     2. Environmental Limitations: Do not install until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  5. WARRANTY
     1. Manufacturer's Standard Limited Warranty: For materials and workmanship.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. EXTRA MATERIALS
     1. Extra Materials: Furnish 2 percent extra materials in accordance with procedures established in pre-installation conference. Deliver in protective packaging for storage and label contents appropriately.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: 3M Commercial Solutions, which is located at: 3M Center Bldg. 223; St. Paul, MN 55144-1000; Toll Free Tel: 888-650-3497; Tel: 651-737-1081; Fax: 651-737-8241; Email: [request info (apeters2@mmm.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=3M+Commercial+Solutions&coid=47922&rep=&fax=651-737-8241&message=RE:%20Spec%20Question%20(09700mmm):%20%20&mf=); Web: <http://www.3m.com/3M/en_US/architectural-design-us/?utm_medium=redirect&utm_source=vanity-url&utm_campaign=www.3M.com/AMD> | <http://www.3m.com/3M/en_US/building-window-solutions-us>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* 3M DI-NOC EX Series Architectural Finishes manufactured in 24 exterior designs including fine wood/woodgrain, metallic, single color and abstract. Suitable for aluminum, galvanized steel and painted steel substrates. Delete if not required.

* 1. ARCHITECTURAL FINISH FILMS
     1. Architectural Finish Films: 3M DI-NOC EX Series Finishes as manufactured by 3M Company - Commercial Solutions.

\*\* NOTE TO SPECIFIER \*\* 9 patterns in the Fine Wood/Woodgrain style. Insert color and pattern number required.

* + 1. Style: Fine Wood/Woodgrain.
       1. Color/Pattern: \_\_\_\_\_\_\_.
       2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* 6 patterns in the Metallic style. Insert color and pattern number required.

* + 1. Style: Metallic.
       1. Color/Pattern: \_\_\_\_\_\_\_.
       2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* 4 patterns in the Single Color style. Insert color and pattern number required.

* + 1. Style: Single Color.
       1. Color/Pattern: \_\_\_\_\_\_\_.
       2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* 5 patterns in the Abstract style. Insert color and pattern number required.

* + 1. Style: Abstract.
       1. Color/Pattern: \_\_\_\_\_\_\_.
       2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* 3M DI-NOC Architectural Finishes manufactured in 12 faux styles, 12 colors based on style providing 650 individual colored patterns. Delete if not required.

* 1. ARCHITECTURAL FINISH FILMS
     1. Architectural Finish Films: 3M DI-NOC Architectural Finishes as manufactured by 3M Company - Commercial Solutions.

\*\* NOTE TO SPECIFIER \*\* Delete style not required.

* + 1. Style: Abstract.

\*\* NOTE TO SPECIFIER \*\* 63 patterns in the Abstract Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Carbon.

\*\* NOTE TO SPECIFIER \*\* 13 patterns in the Carbon Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Concrete.

\*\* NOTE TO SPECIFIER \*\* 3 patterns in the Concrete Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: High Gloss.

\*\* NOTE TO SPECIFIER \*\* 4 patterns in the High Gloss Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Leather.

\*\* NOTE TO SPECIFIER \*\* 28 patterns in the Leather Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Metallic.

\*\* NOTE TO SPECIFIER \*\* 70 patterns in the Metallic Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Pure Color.

\*\* NOTE TO SPECIFIER \*\* 95 patterns in the Pure Color Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Sand.

\*\* NOTE TO SPECIFIER \*\* 7 patterns in the Sand Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Silk.

\*\* NOTE TO SPECIFIER \*\* 7 patterns in the Silk Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Stone.

\*\* NOTE TO SPECIFIER \*\* 9 patterns in the Stone Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Wood.

\*\* NOTE TO SPECIFIER \*\* 337 patterns in the Wood Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.
    1. Style: Woven.

\*\* NOTE TO SPECIFIER \*\* 14 patterns in the Woven Style. Insert color and pattern number required.

* + - 1. Color/Pattern: \_\_\_\_\_\_\_.
      2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* 3M DI-NOC E Series Architectural Finishes manufactured in 2 faux styles, 5 colors based on style providing 94 individual colored patterns. Delete if not required.

* 1. ARCHITECTURAL FINISH FILMS
     1. Architectural Finish Films: 3M DI-NOC E Series Finishes as manufactured by 3M Company - Commercial Solutions.

\*\* NOTE TO SPECIFIER \*\* 91 patterns in the Wood Style. Insert color and pattern number required.

* + 1. Style: Wood.
       1. Color/Pattern: \_\_\_\_\_\_\_.
       2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* 3 patterns in the Abstract Style. Insert color and pattern number required.

* + 1. Style: Abstract.
       1. Color/Pattern: \_\_\_\_\_\_\_.
       2. Color/Pattern: As selected by Architect from manufacturer's full range.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. WHITEBOARD FINISH FILMS
     1. Finish Films: 3M DI-NOC Whiteboard Film as manufactured by 3M Company - Commercial Solutions.
        1. Product: WH-111, white color.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

1. EXECUTION
   1. EXAMINATION
      1. Examine substrate(s) for compliance with requirements for non-porous, smooth surface and other conditions affecting the performance of work in this section. Do not proceed with installation until unsatisfactory conditions have been corrected.
      2. Reference 3M DI-NOC Technical Data Sheet, 3M DI-NOC WH-111 Whiteboard Technical Data Sheet, 3M DI-NOC E Series Technical Data Sheet, 3M DI-NOC EX Series Technical Data Sheet, and 3M DI-NOC Installation Guide to determine compatibility of finish to substrate.
      3. Do not proceed with installation until unsatisfactory conditions have been corrected.
      4. Responsibility for state of surfaces prior to installation to be pre-determined by installation specialist.
      5. Scheduling of installation by Owner or its representative implies that substrate and conditions are prepared and ready for product installation per the recommendations of the installation specialist.
      6. Proceeding with installation implies installer's acceptance of substrate and conditions.
   2. SURFACE PREPARATION
      1. Comply with manufacturers' instructions for surface preparation. Consider these factors in determining the suitability of the Product:
         1. Substrate texture affects Product adhesion and application ease.
            1. Unless the substrate is very smooth, its texture may be visible through product.
            2. Compounds used to smooth a textured substrate permanently change that substrate.
            3. Product removal may damage the substrate or its finish.
         2. Application surface conditions affect product adhesion.
            1. Ensure that the existing paint, surface finish, or wall covering has excellent bond to the substrate area where product will be applied.
            2. Repair, prime and paint the substrate, as needed.
            3. An adhesion promoter may be required to increase product adhesion.
         3. Human and environmental conditions affect product.
            1. Temperature and humidity in recommended range.
            2. Direct UV light (sunlight).
            3. Heating or cooling ducts in close proximity.
            4. Unsealed substrates in front of water sources.
            5. People or equipment that will be in contact with the product.
         4. 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.
      2. Test and prepare application surfaces per instructions in the 3M DI-NOC Installation Guide.
         1. Use the 3M Wall Adhesion Test to determine the compatibility of the application surface with the Product.
         2. Use the 3M Enhanced Cleaning Method to ensure that the application surface is ready to receive and hold the product.
      3. Repair damaged application surfaces per instructions in the 3M DI-NOC Installation Guide
      4. Re-clean application surfaces with a lint-free cloth and 70/30 IPA cleaning solution, or use the 3M Enhanced Cleaning Method in the 3M DI-NOC Installation Guide.
   3. APPLICATION
      1. Refer to the 3M DI-NOC Installation Guide for specific application instructions.
      2. Application must be performed by a qualified installer. Refer to 3M.com/AMD for a list of 3M-endorsed installers.
      3. Do not proceed with installation until all finishing work has been completed in and around the work area.
      4. Measure the application surface and cut film to size with a minimum 1/2 in. extra on all sides for trimming.
      5. Install on application surfaces with no gaps, wire seams, or overlaps. Form smooth, wrinkle-free, bubble-free surface for finished installation.
      6. No exposed joints on corners or other "open" type joints permitted.
      7. Verify pattern prior to material acquisition as some part numbers do not allow three-dimensional forming.
      8. Comply with manufacturer's installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
      9. Apply 3M DI-NOC over properly prepared substrates.
      10. Remove air bubbles, wrinkles, and blisters. Use approved procedures to prevent the formation of air bubbles, wrinkles, blisters and other defects.
   4. SCHEDULE

\*\* NOTE TO SPECIFIER \*\* When more than one pattern of 3M DI-NOC is specified, it is necessary to identify where each pattern will be used. A schedule may be useful for that purpose, if the patterns are not to be indicated on the drawing. The following is a suggested format for such a schedule, with an example. Delete if not required.

* + 1. Room:
    2. Material:
    3. Fixture:
       1. Horizontal Surfaces Exposed to View: Design Category, Product number.
       2. Vertical Surfaces Exposed to View: Design Category, Product number.
       3. Semi-exposed Surfaces: Design Category, Product number.
       4. Shaped Goods: Design Category, Product number.
       5. Moldings: Design Category, Product number.
    4. Shop Drawing Reference: In addition to original A/E elevations, the installation specialist may be asked to provide elevation views of installation surfaces to confirm design intent upon request.
  1. CLEANING AND PROTECTION
     1. Use cleaning methods recommended by architectural surfacing manufacturer for applicable environment.
     2. Protect completed graphic film during remainder of construction period.
     3. Consult with authorized installation specialist for project specifics.

END OF SECTION