



# 3M Products with environmental advantages

Here are some 3M Graphics Market Center products that provide environmental advantages. Additional 3M product information catalogs are available for viewing/downloading. Go to [3Mgraphics.com](http://3Mgraphics.com) then select 3M and the environment.



## **3M™ Light Enhancement Film 3635-100**

3M™ Light Enhancement Film 3635-100 is a 5.5 mil film with a patented matte white diffuse reflective surface. It provides more than 90% reflectivity for increased light output and greater sign luminance, improving lighting efficiency, which may lower costs. Use it to cover all interior opaque surfaces within single-sided, internally illuminated cabinets such as signs and light boxes, channel letters, informational graphic light boxes, vending and dispensing machines and more. It can be electronically cut and thermoformed. Refer to 3M Product Bulletin 3635-100 for complete details.

Using this film can eliminate painting and VOC emissions from the painting process. In addition, it optimizes available light to allow sign manufacturer to decrease lighting components, resulting in less energy use. May apply toward LEED NC-EA (Energy and Atmosphere) credit 1.



## **3M™ Daylighting Film DF2000MA**

3M™ Daylighting Film DF2000MA is a polymeric film providing specular reflection with greater than 99% luminous reflectivity for wavelengths from 400 nm to 775 nm (visible light). This high rate of reflectivity is especially important in applications where light is transferred or directed through multiple reflections. For example, when directing daylight down a duct or a tube with 20 points of reflection, going from 99% reflectivity (a 1% decrease) will cause a decrease in light output of up to a 20%. This metal-free, non-corroding and non-conducting film is well-suited for daylighting applications. It has a pressure-sensitive adhesive for a secure bond and a polyethylene face liner to protect its reflective surface during installation.

This product is extremely efficient at reflecting visible wavelengths of light and can increase the efficiency of lighting or the use of daylighting. Using this product to efficiently transfer daylighting to the building interior, can reduce the energy required for lighting as well as the quality of the environment. Use of this product may contribute to LEED NC- EA Credit 1- (Optimizing Energy Performance) and to LEED NC -EQ (Indoor Environmental Quality) credit 8.1, 8.2 as related to increasing the level of daylighting and dispersion.



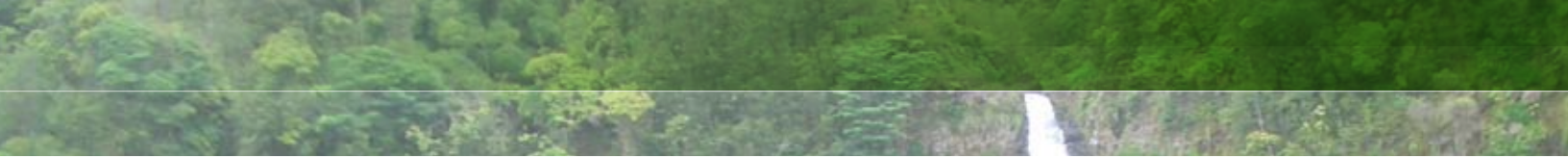
## **3M™ DI-NOC™ Architectural Finishes**

3M™ DI-NOC™ Architectural Finishes include more than 500 patterns designed to offer unlimited creativity and architectural freedom. Now you can create a multitude of visual experiences with the added assurance of 3M's time-proven experience. DI-NOC architectural finishes are self-adhesive flexible laminate films which are ideal for resurfacing and refurbishing hard smooth surfaces.

The product is easy and quick to use and gives amazing results, transforming existing surfaces. It can be used to cover flat panels, doors, furniture, retail units and its ability to mould around complex shapes means it can be used for curved and rounded profiles as well.

DI-NOC architectural finishes can contribute to LEED sustainability credits by reducing items sent to the landfill through the maintaining and reusing the existing stock of walls, doors and frames, built in case goods, furniture, etc. through its innovative architectural finishes. With its variety of textures and patterns, these substrates and more, can be refreshed to a totally new look and feel. May apply toward LEED CI-MR (Material Reuse) credit 3.1, 3.2, 3.3. or LEED NC-MR 1.3, 2.1, 2.2, 3.1, 3.2.





### 3M™ Daylighting Radial Lens Film DRLP22

3M™ Daylighting Radial Lens Film DRLP22 is a continuous web of 4-inch square UV-stabilized polycarbonate lenses. On one side are optical-quality circular prisms 0.0008 inches in depth. The other side of the 0.022-inch film has a smooth finish. The lenses are designed to capture sunlight from a wide range of angles and uniformly distribute the light from its lens surface to an interior space. The unique lens design reduces glare and eliminates hot spots, and because of the optical grade plastic used, the film does not alter the colors of the transmitted light. A majority of the light is contained in a cone angle of 90 degrees. This feature allows lighting designers to efficiently illuminate floor areas and maintain adequate ambient levels on the walls.

One of the key difficulties in capturing and using daylighting is the ability to change the light from an intense and often specular source to a diffuse, distributed source. Without diffusing the light, the intensity /glare is counter productive in lighting a space because of the high contrast ratio. The lens film DRLP22 efficiently distributes and disperses the light to allow daylight to be used effectively. The use of daylighting can enable the reduction in lighting and energy costs. Use of this product may contribute to LEED NC- EA Credit 1- (Optimizing Energy Performance) and to LEED NC -EQ (Indoor Environmental Quality) credit 8.1, 8.2 as related to increasing the level of daylighting and dispersion.



### 3M™ ControTact™ Graphic Films with Comply™ Adhesive 3545C, and 3M™ Scotchcal™ Overlaminates 8908 and 8909

Film 3545C is a 4-mil polyolefin film with a slideable and repositionable, pressure-activated adhesive with air release channels for fast and easy application. This film is removable, and is ideal for medium-term graphics for fleet or commercial vehicles and indoor or outdoor graphic applications. It is designed for screen printing, piezo inkjet printing and electrostatic imaging. Polyolefin overlaminates verlaminate provide indoor and outdoor graphics protection against the elements, including defense against damaging UV rays. Overlaminates 8908 is a luster finish and overlaminates 8909 is a matte finish.

Using graphic films instead of paint can eliminate VOC emissions from the painting process. Many graphic films meet flammability performance requirements for building and transit applications. These are polyolefin films.



### 3M™ Primer OP-2000

3M™ Primer WP-2000 is especially designed for use with DI-NOC™ Architectural Finishes at areas of extreme bending or porous substrates. It provides long term adhesion for permanent installations without the odor of solvent based primers.

Primer WP-2000 is specially designed for areas requiring low VOC's. WP-2000 is a water based primer for application in areas of added stress that require extra bonding strength. WP-2000 has a VOC limit of 62 g/L, below the VOC limit of 350 g/L for specially primers. LEED CI -EQ (Indoor Environmental Quality) 4.2-low emitting materials.



### 3M™ Scotchcal™ Translucent Graphic Films

These translucent films are for backlit sign and awning applications.

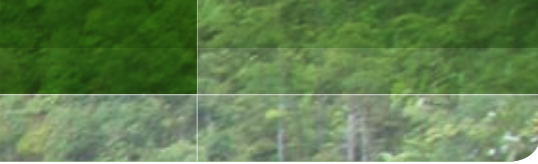
Using graphic films instead of distortion screen printing or painting can eliminate VOC emissions and waste associated with these processes.



### 3M™ Vikuiti™ Rear Projection Films

Vikuiti™ Rear Projection film is a flexible, self-adhesive that can be applied to window or transparent partitions. The film easily cuts to different shapes and sizes and is fast to remove, leaving no adhesive residue. It can be integrated with other window graphics or be applied to rigid clear acrylic panels to create portable displays.

Compared to other rear projection screens, you can use a less powerful projector to get the same impact.



### 3M™ Light Pipe

3M™ Light Pipe Series LPS100, LPS150 and LPS250 are innovative, modular lighting systems that are designed to distribute light evenly along their entire length. The light pipes are a series of cylindrical, interconnected light distribution modules ranging in length from 4 to 20 meters for LPS250 series and from 8 to 64 feet for LPS100 series and LPS150 series. These modules, called light pipes, are lined with a 3M™ Optical Lighting Film 2301 with unique properties that produce a uniform illumination from a single light source. An extractor strip of 3M™ Light Enhancement Film 3635-100 diffuses light reflection inside the pipe so that it is uniformly distributed along the entire length of the system.

3M Light Pipe can save energy used in certain configurations, especially when used with energy-efficient light sources in some applications.

With an energy efficient light engine, it can offer energy savings. Offers a safer option compared to incandescent or fluorescent lights, as no mercury or heavy metals are present in the light pipe modules. Additionally, 3M Light Pipe offers a safety feature compared to glass tubed lights as breakage is not a concern.



### 3M™ Scotchcal™ Dusted and Frosted Crystal Film Series 7725SE

3M™ Scotchcal™ Dusted and Frosted Crystal special effect films allow the creation of distinctive designs and light effects on glass. These affordable films provide an etched or sand blasted appearance. The films can be applied to glass, acrylic or polycarbonate. Through their use on exterior windows, they can reduce glare and assist in the increase of daylighting to help save energy and improve indoor environmental quality. May apply toward LEED NC -EQ (Indoor Environmental Quality) credit 8.1, 8.2.



### 3M™ Scotchcal™ and Controltac™ Graphic Films, Opaque

These vinyl, polyester, and/or polyolefin films are 2 to 4-mils thick. Some films feature 3M™ Controltac™ and 3M™ Comply™ Adhesive technologies to enable fast and easy bubble-free graphic installations. These films have excellent hiding power and outdoor durability, making them perfect for interior or exterior signs, fleet graphics, including surfaces with corrugations and rivets.

Use of graphic films instead of paint can eliminate VOC emissions from the painting process. Many graphic films meet flammability performance requirements for building and transit applications.



### 3M™ High Luminance Light Fiber

3M™ High Luminance HL Light Fiber, an especially brilliant type of fiber that creates a bright, visually uniform effect. Features:

- Compliments neon and LED chip strips
- High durability- resists breakage
- Fiber is flexible
- Design flexibility with clean appearance
- Ideal for indoor and outdoor applications
- Remote light source
- Cool to the touch
- No electrical hazard along fiber
- Low voltage alternatives
- Easy to change light source

3M HL High Luminance Light Fiber can save energy used in certain configurations, especially when used with energy-efficient light sources in some applications. With an energy efficient light engine, such as LEDs, it can offer energy savings as a subtle decorative feature. Offers a safer option compared to neon or fluorescent lights, as no mercury or heavy metals are present in the fiber. Additionally, 3M HL High Luminance Light Fiber offers a safety feature compared to glass tubed lights as breakage is not a concern.



### 3M™ Scotchcal™ Dusted and Frosted Film Series 7725SE

3M™ Scotchcal™ Dusted and Frosted Crystal special effect films allow the creation of distinctive designs and light effects on glass. They are affordable and provide an etched or sand blasted image. The films can be applied to glass, acrylic or polycarbonate.

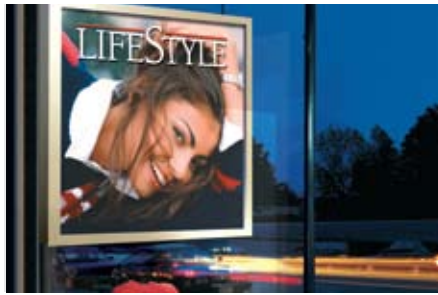
Through their use on exterior windows, they can reduce glare and assist in the increase of daylighting and decrease in artificial lighting- saving energy and improving the indoor environmental quality. May apply toward LEED NC -EQ (Indoor Environmental Quality) credit 8.1, 8.2.



### 3M™ Piezo Inkjet UV Inks

These UV inks are durable, weather-resistant and have excellent color retention. They are highly flexible and conformable, even on complex curves and rivets.

Using UV inks can eliminate VOC emissions associated with solvent inks.



### 3M™ Scotchcal™ Graphic Film IJ35E-20R

3M™ Scotchcal™ Graphic Film IJ35E-20R, a polyolefin film compatible with piezo inkjet, screen and electrostatic printing platforms for promotional applications was recently introduced. The new polyolefin film IJ35E and polyolefin overlaminates, 3M™ Scotchcal™ Luster Overlaminates 8908 and Matte Overlaminates 8909, have no monomeric plasticizers or polyvinylchloride in their constructions and are made with less solvent in manufacturing compared to traditional solvent-based adhesive products. Chloride-free constructions such as these eliminate halogen-related disposal concerns. When printed with UV ink, VOC emissions associated with solvent inks are dramatically reduced, resulting in graphic constructions that have less impact on the environment.



### 3M™ Screen Printing UV Ink Series 9800 and 3M™ Screen Printing Gloss Clear 9720UV and 9720i

3M™ Screen Printing UV Ink Series 9800 is a high performance, ultraviolet-curable ink system used to print multicolor graphics on a wide variety of 3M graphic films. The ink series includes transparent, opaque and four color process inks for use on indoor or outdoor graphics. When protected with selected 3M clears, this ink produces a tough, flexible, graphic coating that is weather, chemical and abrasion resistant. It also has superior performance on difficult application surfaces, including corrugated and riveted surfaces. Refer to 3M Product Bulletin 9800 for complete details.

Using UV inks can eliminate VOC emissions associated with solvent inks.



### 3M™ Uniform Lighting Panels

The 3M™ Uniform Lighting Panel is a clear rigid panel that has an innovative 3M optical lighting film mounted to it. This film is specifically designed to reflect or transmit light depending upon the angle at which a light ray strikes its surface with very low light absorption. Because of these unique optical properties, these lighting panels can be used in light boxes to transport and distribute the light uniformly with extremely high efficiency, while minimizing the number of lamps needed and the thickness of the box. Refer to 3M Product Bulletin ULP for complete details.

Offers a reduction in energy consumption compared to traditionally backlit boxes. Features brightness suitable for backlit applications. May apply toward LEED NC -EA (Energy and Atmosphere) credit 1.



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