



Daylighting Film DF2000MA

Description

3M™ Daylighting Film DF2000MA is a polymeric film providing specular reflection with greater than 99% luminous reflectivity. 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 liner to protect its reflective surface during installation.

End Uses

Film DF2000MA may be used for a variety of commercial and residential applications.

Unsuitable End Uses for This Film

- Exposure to:
 - Sunlight radiation wavelengths less than 380 nm
 - Abrasive conditions, which may scratch the film
- Graphics and signs; contact 3M Graphics Market Center at 1-800-374-6772 for alternatives

Product Characteristics

Optical Characteristics

Characteristic	Value	Test
Luminous Reflectivity	> 99%	ASTM E1164-02/ E308-01
Color a* b*	-2 < a* < 2 -2 < b* < 2	ASTM E1164-02/ E308-01
Bandwidth, 90% Reflectivity (0 to 80° angle of incidence)	400 to 775 nm	3M
Wavelengths Transmitted (0 to 80° angle of incidence)	> 775 nm	3M

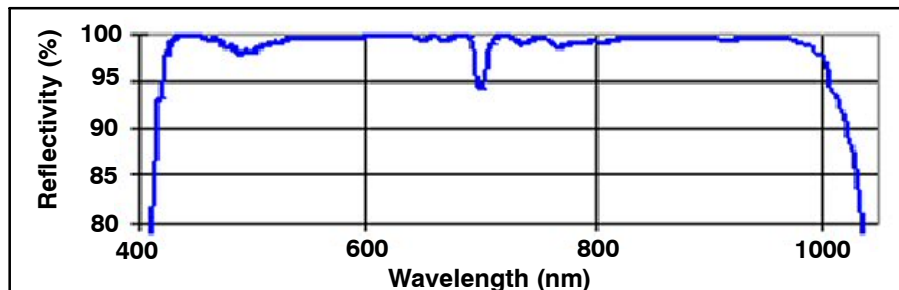
Optical Characteristics (continued)

Characteristic	Value	Test
Wavelengths Absorbed	< 400 nm	3M
Usage Angle	0 to 90 degrees	3M

Physical Characteristics

Characteristic	Value	Test
Film	Polymeric film	-
Liner, Adhesive	Paper	-
Liner, Protective	Polyethylene	-
Adhesive	Pressure-sensitive	-
Width Film and Liners Adhesive	51 inches (130 cm) > 49 inches (125 cm)	-
Total Thickness (nominal) Film Adhesive Liner, Adhesive Liner, Protective	8.1 mils (206 μm) 2.6 mils (66 μm) 1.5 mils (38 μm) 2.9 mils (74 μm) 1.1 mils (28 μm)	3M
Total Density (film, adhesive and liners)	20 ft ² /lb (4 m ² /kg)	3M
Tensile Strength (film)	> 35 lb/in (6.2 kg/cm)	ASTM D-882
Elongation at Break (film)	> 60%	ASTM D-882
Modulus (film)	> 550 lb/in ² (39 kg/cm ²)	ASTM D-882
Heat Shrinkage (film)	< 1% at 302°F (150°C), 15 minutes	ASTM D-1204-02

Typical Normal Angle Spectral Response



Application Characteristics

Characteristic	Description
Surface Type	Flat and simple curved surfaces
Substrate Type	<ul style="list-style-type: none">Laminated on any substrate the user tests and approvesCold formed on aluminum sheeting
Application Temperature	72°F (22°C) <i>minimum</i>

Handling and Fabrication

Caution

When using any equipment, always follow the manufacturers' instructions for safe operation.

Handling. Since a roll of this film typically weighs more than 1000 pounds (454 kg), lifting equipment is required when handling the film.

Protective Liner. To prevent scratching or marking the film's reflective surface, do not remove the protective liner until all fabrication and installation processes are finished. When ready, carefully remove the liner.

Lamination. This film can be applied with a roll laminator. Use a dry application method only. Keep the protective liner on the film during the entire lamination process.

Cleaning

Do not attempt to dust or clean the film. This can damage the film's reflective surface.

Shelf Life and Storage

Activity	Recommendation
Shelf life	Process within 1 year
Storage conditions	<ul style="list-style-type: none">100°F (38°C) maximumOut of sunlightClean dry areaOriginal container

Product Use

The user is solely responsible for evaluating and determining whether this 3M product is suitable and appropriate for any particular use or manufacturing process in which it may be used.

3M

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from Commercial Graphics Division

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Technical Information

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Warranty Information

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