

3M™ PRINT WRAP FILMS

IJ-180CV3-10

2mil Pressure Activated Adhesive Vinyl
3M Comply™ Air Release

Common Uses
Vehicle Wraps, Windows, Commercial Vehicles, Watercrafts & More

Longevity
Long-term (8 Years)

Environment
Indoor & Outdoor

Print Sides
Single-sided

Size Options
Custom Size

Options
Contour Cut
Gloss, Matte or No Laminate

Technical Data >

TECHNICAL DATA SHEET

PROPERTIES

2mil white, vinyl film with a luster finish
Excellent hiding power
Pressure-activated adhesive for easy sliding, tacking, snap up and repositioning
Flexible; conforms to compound curves, corrugations and rivets
Many finished graphic constructions can be stretched up to 130% (i.e., a 10 inch [25 cm] piece of film can stretch to 15 inches [39 cm]) without primer or relief cuts and maintain lift resistance.
Comply™ Adhesive air release channels for fast, easy, bubble-free installations
Air release channels are non-visible and have improved air release
Removable with heat and/or chemicals

PHYSICAL CHARACTERISTICS

Material: Cast vinyl
Film color: White, opaque
Thickness:
- Without adhesive: 2 mil (0.05 mm)
- With adhesive: 3-4 mil (0.08-0.10 mm)

Adhesive: Pressure-activated (slide, tack, snap up, reposition) with air release channels
Adhesive color: Gray
Liner: Polyethylene-coated paper
Adhesion, Typical 24 hours after application:
- ABS 4-5 pounds/inch (0.72-0.89 kg/cm)
- Acrylic enamel 3-4 pounds/inch (0.54-0.72 kg/cm)
- Aluminum, anodized 7-8 pounds/inch (1.26-1.43 kg/cm)
- Aluminum, etched 5-6 pounds/inch (0.89-1.08 kg/cm)
- Chrome 4-5 pounds/inch (0.72-0.89 kg/cm)
- Fruehauf pre-painted panels 3-5 pounds/inch (0.54-0.89 kg/cm)

Tensile strength: 5 pounds/inch at 73°F (0.9 kg/cm at 23°C)
Chemical resistance:
- Resists mild alkalis, mild acids, and salt
- Excellent resistance to water (does not include immersion)
- Resists occasional fuel spills

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APPLICATION CHARACTERISTICS

Finished graphic application recommendation

Surface type: Flat, with and without rivets, simple curves, compound curves, & corrugations

Substrate type: ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, paint (Check adhesion to powder-coated or water-based paints),fiberglass with gel coat

Application method: Dry

Application temperature: air and substrate

Flat without rivets: 40°-100°F (4°-38°C)

Curves or corrugations with rivets: 50°-100°F (10°-38°C)

Compound curves and/or watercraft: 60°-90°F (16°-32°C)

Applied shrinkage: 0.015 inches (0.4 mm)

Temperature range after application: -65° to +225°F (-60° to +107°C)

Graphic removal: Removable with heat and/or chemicals from most substrates within the Warranty Period at 50°F (10°C) minimum (air and substrate)

EXPOSURE TYPES

U.S. Vertical Exposure: The face of the graphic is +/- 10° from vertical.

U.S. Non-vertical Exposure: The face of the graphic is greater than 10° from vertical and greater than 5° from horizontal. This includes non- vertical surfaces of vehicle wraps or fleet truck and trailer graphics.

U.S. Horizontal Exposure: The face of the graphic is +/- 5° from horizontal.

U.S. Desert Southwest Exposure: Any outdoor graphic exposed to solar energy more than half of the daylight hours in Arizona, New Mexico and the desert areas of California, Nevada, Utah and Texas is subject to reduced warranties.

WORKING WITH AIR RELEASE CHANNELS

Air release channels are a characteristic of films with Comply adhesive. Films designated as Cv3 offer the ultimate in invisible air release channels.

The channels will be damaged and effective air removal affected if you remove and attempt To change liners or reapply the same liner.

For the best results, always work from the center out to the edges of the graphic to allow trapped air to exit through the air release channels. If the channels are closed off by firm pressure and air is trapped, use an air release tool to aid in removing air bubbles.

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PRESSURE-ACTIVATED ADHESIVE

The pressure-activated adhesive on this film offers:

- Smooth sliding into position on a substrate;
- Fast finger tacking to check position; and
- Easy snap up and repositioning when you need it.

The snap up and reposition feature is lost:

- When firm pressure with a squeegee or other application tool is applied.
- At application temperatures above 100°F (38°C) even if only light finger pressure was used for tacking.
- If any part of the film is removed from the original liner and reapplied to the same or another liner.

UNSUITABLE END USES

Do not use for graphics applied to:

- Stainless steel.
- Watercraft when the graphic is below the static water line.
- Watercraft graphics that are not edge sealed.
- Painted substrates with poor paint to substrate, or paint-to-paint bond.
- Substrate surfaces that are not clean and smooth (little or no variation in texture).

Do not use the film for graphics that require removal from:

- Applications with poor paint-to-substrate adhesion.
- Existing graphics that must remain intact; damage may occur during removal.
- Watercraft.
- Outdoor, horizontal applications.

Do not use for graphics subjected to gasoline vapors or spills, including those at or on gas pumps, automobile fuel-tank ports, watercraft or top-feeding, petroleum tankers

FOR WATERCRAFTS

Graphics must be applied above the static water line.

Graphics must be cut at seams. All edges and seams must be sealed.

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FACTORS THAT AFFECT GRAPHIC PERFORMANCE LIFE

The actual performance life of a graphic is affected by:

- Surface texture.
- Application methods.
- Angle and direction of sun exposure.
- Environmental conditions.
- Cleaning or maintenance methods.

MAINTENANCE & CLEANING

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline.)

REMOVAL

Removal requires heat and/or chemicals. The ease and rate of removal depends on a number of factors. A chemical remover system is available for graphics printed with solvent-based ink.

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LAMINATE DATA

GLOSS LAMINATE

Color: Clear
Adhesive: Pressure sensitive, clear
Liner: Polyester
Thickness:
- 2 mil (0.05 mm) without adhesive
- 3-4 mil (0.08 to 0.10 mm) with adhesive

Tensile Strength (minimum): 5 pounds/inch at 73°F (0.9 kg/cm at 23°C)
Dimensional Stability: 0.015 inch (0.4 mm)
In Use Temperature: -65° to +225°F (-54° to +107°C)
Chemical Resistance:
- Resists mild alkalis, mild acids and salt
- Excellent resistance to water
- Resists petroleum vapors

MATTE LAMINATE

Material: Cast vinyl
Thickness: 2 mil
Liner: Kraft paper
Lamination Temperature: 60°F to +100°F (15°C to +38°C)
In Use Temperature: -65°F to +200°F (-54°C to +93°C)
Chemical Resistance:
- Resists mild alkalis, mild acids, and salt
- Excellent resistance to water (does not include immersion)
- Resists occasional fuel spills