B.C.I. IMAGING

24-Vue™ Two Way Vision Window Film

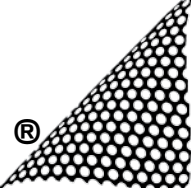|	
Perforation pattern:	Approx. 70/30 (30% open)
Perforation size:	Approx. 0.055 (1.4 mm)
Film:	5.5-mil PVC on a 3-in. core
Standard roll sizes:	54 in. x 100 ft.
Application:	POP, retail & commercial window graphics for short-term indoor and outdoor applications where two-way visual communication is desired
Product code:	CF24VDL
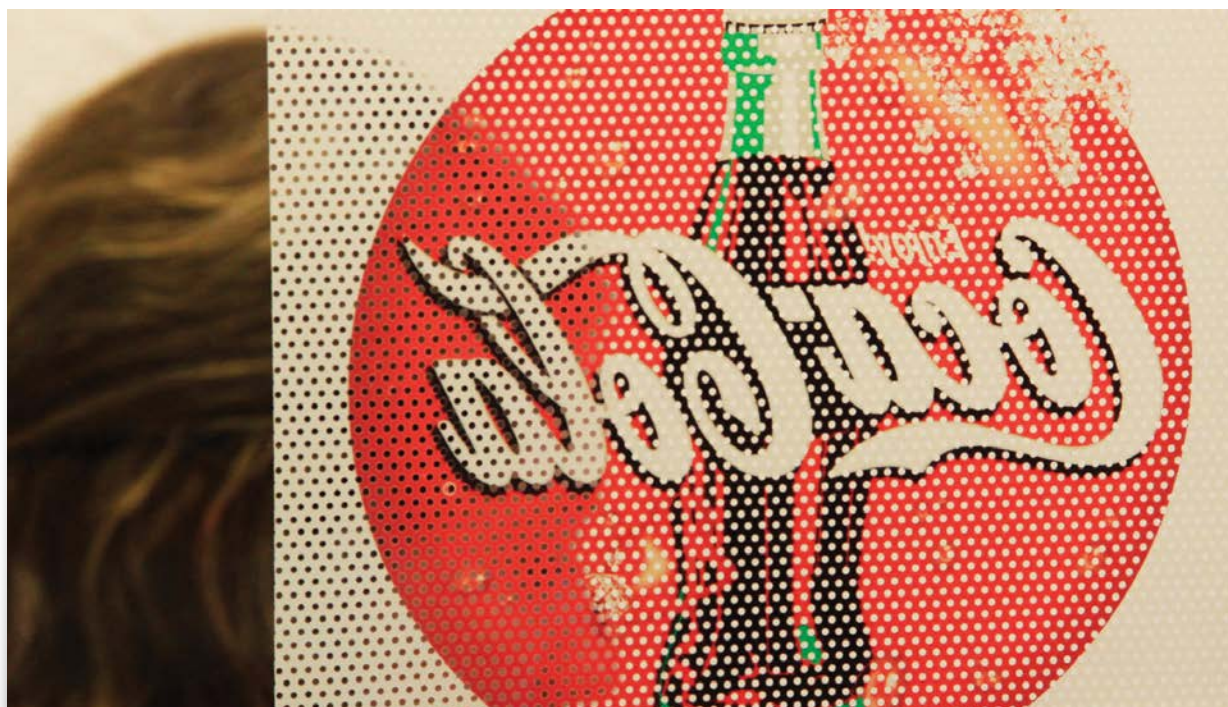
CLEAR FOCUS Imaging, Inc.

Exterior/Interior Mount Product Specifications   Product Code: CF24VDL

5.5-mil semi-clear film providing two-way visibility on glass, acrylic and other clear substrates. Features a clear removable adhesive and Do-ALLiner® dual-layer release liner.

Applications	POP, retail and commercial window graphics for short-term indoor and outdoor applications where two-way visual communication is desired.
Composition	Translucent calendered PVC with a clear pressure-sensitive adhesive and dual-layer release liner.
Open Area	30%, approx.
Vinyl Thickness (incl. adhesive)	5.5 mils (0.0055 in./140 microns), approx.
Release Liner Composition	Solid paper liner laminated to perforated paper.
Release Liner Thickness	7 mils (0.007 in./178 microns), approx.
Adhesive Thickness	.5 mils (0.0005 in./13 microns), approx.
Perforation Diameter	.055 in. (1.4 mm)
Standard Widths/Lengths	54 in. x 100 ft. (137 x 30.48 m). Custom sizes available by special order.
Minimum Application Temperature	40° F (4° C)
Dimensional Stability	Good
Service Temperature Range	0° F to 140° F (-17° C to 60° C)
Expected Lifetime Exterior	Up to 1 year; 3 months for clean removal. Adhesion may increase with time. Testing recommended before production to determine suitability of product for intended application.
Storage Stability	Up to 1-year shelf life when stored at 70° F (21° C) +/- 5° and 50% relative humidity.
Production Environment	Film should be used in a clean, dust-free environment.
Printing	Compatible with solvent, eco-solvent and UV-cure inks. Testing is recommended with latex printers. Allow inks to dry completely before handling the printed film. Conducting a test prior to production is recommended.
Installation	Apply to clean, dry glass or other clear surface. Use mild soap and water, rinse and dry surface well. Do NOT use ammonia, Windex® or other solvent-based glass cleaner prior to application. Designed for use on flat, smooth surfaces.
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Subject to change without notice

EconoVue® 80/20

Perforation pattern:	Approx. 80/20 (20% open)
Perforation size:	Approx. 0.060 (1.5mm)
Film:	Approx. 5.5-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 in. x 100 ft.
Application:	POP, retail & commercial window graphics for short-term use
Product code:	CFEVSL / CFEVCL

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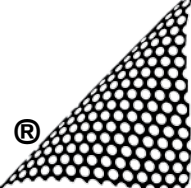
Exterior Mount Product Specifications   Product Code: CFEVSL/CFEVCL

5.5-mil white/black composite PVC with clear removable acrylic pressure-sensitive adhesive. Available with an unperforated solid paper liner (CFEVSL) or a clear liner (CFEVCL) consisting of clear PET film laminated to perforated paper to absorb ink.

Applications	Windows, glass doors or other transparent surfaces for short-term POP, retail window graphics or similar applications.
Composition	White/black composite PVC with clear pressure-sensitive adhesive and an unperforated solid paper release liner or a clear PET liner (thickness of which may vary).
Open Area	20%, approx.
Vinyl Thickness (incl. adhesive)	5.5 mils (0.0055 in. /140 microns), approx.
Release Liner Thickness	Solid paper liner: 6 mils (0.006 in./153 microns), approx. Clear PET liner: 5.5 mils (0.0055 in./140 microns), approx.
Adhesive Thickness	.5 mils (0.0005 in./13 microns), approx.
Perforation Diameter	.060 (1.5 mm), approx.
Standard Widths/Lengths	54 in. x 100 ft. (137 x 30.48 m.) Custom sizes available by special order.
Dimensional Stability	Fair
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (-17° C to 60° C)
Expected Lifetime Exterior	Up to 1 year; 3 months for clean removal. Adhesion may increase with time. Testing recommended before production to determine suitability of product for intended application.
Water Resistance	Fair. Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Fair
Storage Stability	6-month shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on print side, black on adhesive side.
Printing	Use standard vinyl inks. Print image on vinyl, not on the release liner. EconoVue with the solid paper liner is compatible with inkjet printing using solvent, eco-solvent, mild solvent, and latex inks; screen printing; thermal transfer; and airbrushing. EconoVue with the clear PET liner is compatible with UV-cure inks and the above methods (testing is recommended with latex inks). Allow inks to dry thoroughly and outgas prior to applying an overlaminate.
Installation	Apply to clean, dry glass or other clear surface. Use mild soap and water, rinse and dry surface well. Do NOT use ammonia, Windex® or other solvent-based glass cleaner prior to application.
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Other EconoVue Products

Other EconoVue Products	Other economy-grade products featuring different perforation patterns, diameters, release liners, and roll sizes are available by special order.

Subject to change without notice

DuoVue™

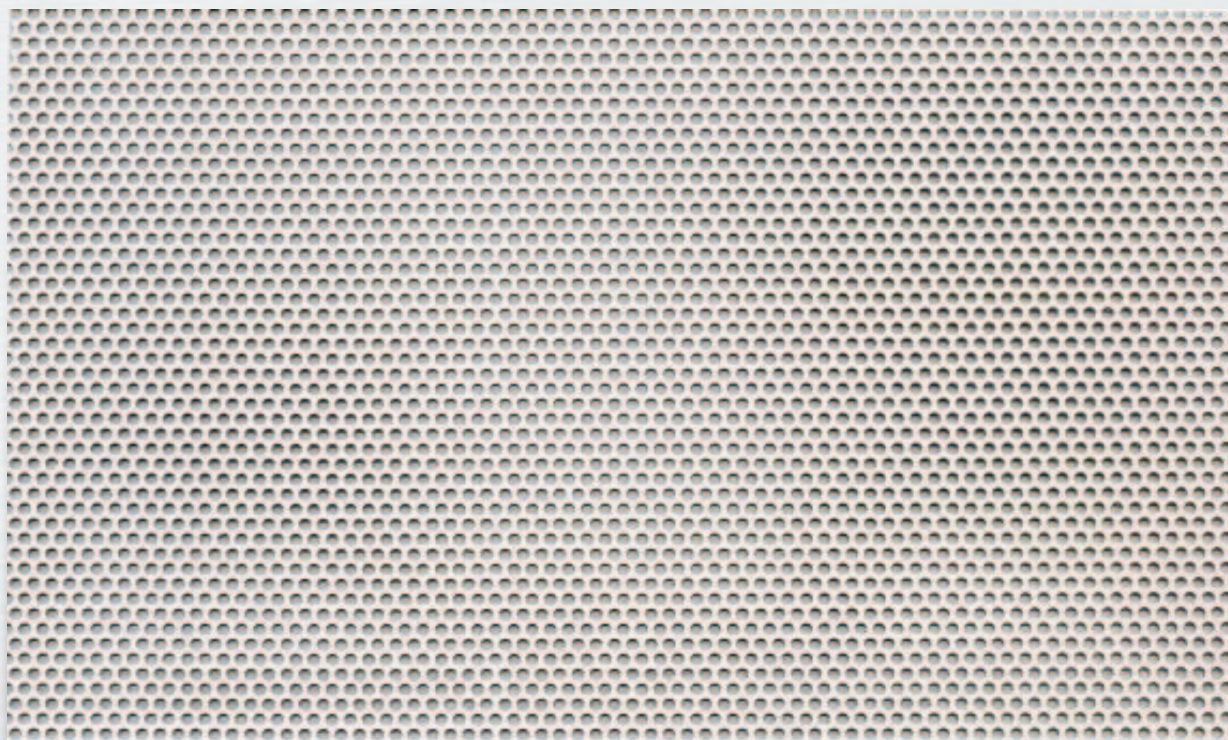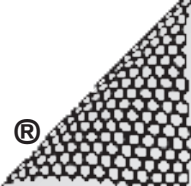|	
Perforation pattern:	Approx. 60/40 (40% open)
Perforation size:	Approx. 0.062 in. (1.6 mm)
Film:	Approx. 12-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 in. x 100 ft.
Application:	Double-sided graphics for retail, visual merchandising, wayfinding, etc.
Product code:	CFWWDV

®

Non-adhesive Banner Product Specifications　　　Product Code: CFWWDV

12-mil double-sided white, non-scrim, opaque perforated PVC banner without release liner. Features a blockout layer in the middle to provide a high degree of opacity.

Applications	Double-sided banners or window graphics for point-of-purchase, retail, visual merchandising, architectural and decorative applications.
Composition	High-opacity white/white PVC composite film with a center blockout layer.
Open Area	40% (approx.)
Vinyl Thickness	12 mils (.012 in./304 microns), approx.
Perforation Diameter	.062 in. (1.6 mm), approx.
Standard Width/Length	54 in. x 100 ft. (1.37 x 30.48 m)
Dimensional Stability	Good
Service Temperature Range	0° F to 140° F (-17° C to 60° C)
Expected Lifetime	2 years
Water Resistance	Fair. Immersion in water not recommended.
Humidity Resistance	Fair
Solvent Resistance	Good
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on both sides.
Printing	Standard vinyl inks recommended. Compatible with printers having a Mesh mode or other method of capturing ink overspray.
Installation	Ceiling-mounted frames, snap-in banner stands or other displays designed for interior hanging graphics. Can also be attached to the interior or exterior surface of clean, dry glass door or window using optically clear transfer adhesive, such as CLEAR FOCUS AdHereVue®; optically clear single-sided adhesive tape (e.g., CLEAR FOCUS Tack'em™ Tape 1) or optically clear double-sided adhesive tape (e.g., Tack'em™ Tape 2); or other suitable poster display method.

Subject to change without notice

ClassicVue®

|	
Perforation pattern:	Approx. 50/50 (50% open)
Perforation size:	0.06 in. (1.5 mm)
Film:	8-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 in. x 25 ft.
	18, 36 & 54 in. x 100 & 1000 ft.
Application:	Vehicle window wraps, medium-format retail and commercial window signage
Product code:	CFEABW

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CLEAR FOCUS ClassicVue® FILM   Flexible Vinyl
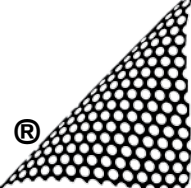
Exterior Mount Product Specifications   Product Code: CFEABW

8-mil white/black composite PVC with clear removable acrylic pressure-sensitive adhesive and a release liner consisting of clear PET film laminated to perforated paper to absorb ink.

Applications	Windows, glass doors and other transparent surfaces.
Composition	White/black PVC laminate with clear pressure-sensitive adhesive coating and a release liner consisting of clear PET film laminated to perforated paper to absorb ink.
Open Area	50% (approx.)
Vinyl Thickness (incl. adhesive)	8 mils (.008 in./203 microns), approx.
Release Liner Thickness	7 mils (.007 in./178 microns), approx.
Adhesive Thickness	1 mil (.001 in./25 microns), approx.
Perforation Diameter	.060 in. (1.5 mm)
Standard Widths/Lengths	18, 36 & 54 in. x 100 & 1000 ft. (45.72, 91.44 & 137 cm x 30.48 m & 304.8 m) and 54 in. x 25 ft. (137 cm x 7.62 m) Custom sizes available by special order.
Dimensional Stability	Good
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (-17° C to 60° C)
Expected Lifetime Exterior	2 to 3 years. 6 months for clean removal. Adhesion may increase with time.
Water Resistance	Fair. Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Good
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity
Colors Available	White on print side and black on adhesive side.
Printing	Use standard vinyl inks. Print image on vinyl side, not on release liner. Compatible with screen printing; inkjet printing using solvent, eco-solvent, mild solvent, latex (with solid paper liner) and UV-cure inks; thermal transfer; electrostatic transfer; and airbrushing.
Application	Apply to clean, dry glass surface. Use mild soap and water, rinse and dry glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaner prior to application.
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Other ClassicVue Products

ClassicVue with a White PET Liner Code: CFEABWWL	Features a patented white PET liner consisting of white PET film laminated to perforated paper to absorb ink and to facilitate sensing of media by printer. Compatible with all printing methods listed above, except latex inks. Custom order.
ClassicVue with a Solid Paper Liner Code: CFEABWSL	Features an unperforated solid paper liner. Recommended for latex inks. Not compatible with UV-cure printers. Custom order.

Subject to change without notice

CLEAR FOCUS® One Way Vision™ Films
HP Latex Printer Compatibility

Registered Latex Developer

Several CLEAR FOCUS perforated window graphics films to date have met HP's compatibility standards for the HP Designjet Latex Printers These perforated window films are ideally suited for producing POP posters, retail and commercial window signage, trade show graphics, and a host of other applications.

CLEAR FOCUS Films Approved for the L25500

- **ImageVue®** with the unperforated solid paper liner
- **EconoVue®** with the unperforated solid paper liner
- **ReflectVue®** with the unperforated solid paper liner
    Recommended Profile: HP Perforated Adhesive Window Vinyl

## CLEAR FOCUS Film Tested Successfully

- **ClassicVue®** with the unperforated solid paper liner has been tested successfully by HP with the HP L25500 and L26500/L28500.
    Recommended Profile: HP Perforated Adhesive Window Vinyl
    (When using ClassicVue with the solid paper liner, the default temperature settings may be too low to cure the latex inks properly. To ensure adequate ink curing, increase the temperatures slightly.)

- **EconoVue® 60/40** with unperforated solid paper liner tested on the L26500/L28500
    Recommended Profile: HP Permanent Gloss Adhesive Vinyl

- **EconoVue® 70/30** with the solid paper liner tested on the L26500/L28500
    Recommended Profile: HP Perforated Adhesive Window Vinyl

- **EasyCling™** (formerly UV-See) gloss clear polyester film tested with L26500/L28500

For more information, contact your CLEAR FOCUS Regional Sales Manager or corporate headquarters.

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10/2014

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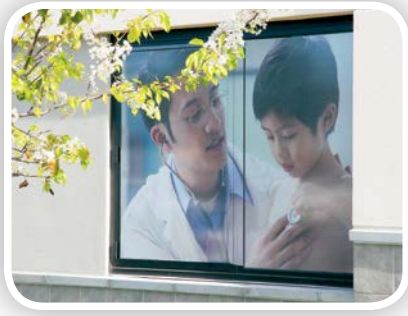
ClearLam®

Product description:	ClearLam is a 1.5-mil pressure-sensitive polyester cold-laminating film. ClearLam protects graphics against marking and scuffing, enhances the water resistance of graphics and provides UV protection, thereby increasing the life of the printed image.
Areas of use:	• Protective overlaminate for CLEAR FOCUS One Way Vision™ calendered window graphics films. • Also compatible with cast print media. • Glass or transparent flat surfaces. Not designed for use on curved surfaces. • For use on small-format graphics only. • Can be cleaned with mild non-abrasive detergents.
Standard roll sizes:	36 & 54 in. x 100 ft. (91.44 & 137 cm x 30.48 m)

CLEAR FOCUS ClearLam®	Optically Clear Polyester Overlaminating Film

Typical Performance Values – *Not intended for specification use*

Product Code: CFCL

Product	Optically clear polyester overlaminating film
Gloss Level	125 (avg.) at 60°
Adhesive	Clear permanent acrylic
Typical Adhesion Values	180° Peel Test

Substrate	15 min.	24 hrs.
Stainless Steel	2.3 lbs/in.	31 lbs./in.

Film Thickness (including adhesive)	Approx. 1.5 mils (38.1 microns; .0015 inches) gloss polyester
Release Liner	Approx. 1 mil (25.4 microns; .0010 inches) polyester
UV Resistance	Good to excellent
Chemical Resistance	Resistant to ammonium hydroxide – 10%, antifreeze, detergent, distilled water, gasoline and motor oil – SAE 20
Outdoor Durability	Up to 2 years
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (–17° C to 60° C)
Shelf Life	2 years from ship date when stored at 70° F (21° C) and 50% relative humidity.
Application	Designed for use with graphics to be applied to flat surfaces. Not recommended for use on curved surfaces.

Subject to change without notice

CLEAR FOCUS CrystalVue™, EtchVue™ and Glass EtchVue™ Installation Instructions

Recommended tools:
- Soft-edged squeegee designed for wet application
- Isopropyl alcohol (optional)
- Water or suitable application solution in a spray bottle
- Clean cloth and lint-free towels
- Masking tape for creating 'hinges' (for larger graphics)
- Transfer tape for premasking (recommended for plotter-cut graphics)
- Utility knife to trim graphic, if needed
- Pin

These cast vinyl films are designed for dry application or wet application using water or an application fluid (e.g., a solution of water containing 2% mild liquid soap in a spray bottle). Recommended for larger graphics, wet application allows the graphic to be repositioned during installation and helps to prevent air bubbles from getting trapped between the film and the mounting surface.

Premasking the graphic with transfer tape is recommended for plotter-cut graphics with letters or designs.

Temperature of glass must be moderate — between approx. 40° F (5° C) and 85° F (30° C).

Preparation of Installation Surface

1. Wash the glass or other installation surface with mild soap and water. Rinse well with water. Do not use ammonia, Windex® or other solvent-based glass cleaner to clean the surface.
2. Moisten a clean cloth with isopropyl alcohol and wipe the surface to remove any residue. Dry with a lint-free paper towel.

Graphic Installation

1. If the graphic is large, cut some strips of masking tape and have ready to attach to the top of the graphic to create a hinge.

2. Lightly spray the installation surface with water or application fluid.
Note: In the case of graphics that are wider than about 18 inches, it may be difficult to move trapped air bubbles in the center of the graphics to the edges using a squeegee. For easier application, it may help to spray the adhesive side of the film in addition to the mounting surface.

3. Remove the liner from the graphic and position the graphic in place, using the tape hinges if needed to secure it.

4. Working from the center outward to the edges, squeegee the graphic using short, overlapping strokes to remove any trapped air, water or application fluid.

5. Remove the transfer tape, if applicable.

6. Squeegee and wipe away any remaining water or fluid and examine the graphic for any bubbles under the surface. If there are bubbles, use a pin to gently prick the bubble and press the area with your finger and/or squeegee to release the trapped air, water or application fluid.

7. Remove the tape hinges, if applicable.

It can take a day or two for any remaining water or application fluid to fully evaporate.

CrystalVue™ Silver
Glass EtchVue™
EtchVue™

Film:	2- to 3-mil cast PVC on a 3-in. core
Standard roll size:	24 & 48 in. x 25 & 100 ft.
Application:	Architectural, decorative, privacy, special effects, signage

CrystalVue™ Silver
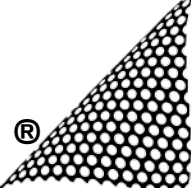**Product code: CFCYVS**

Glass EtchVue™
Product code: CFGETV

EtchVue™
Product code: CFETV

CLEAR FOCUS CrystalVue™ Silver FILM	Product Code: CFCYVS
CLEAR FOCUS Glass EtchVue™ FILM	Product Code: CFGETV
CLEAR FOCUS EtchVue™ FILM	Product Code: CFETV

Interior/Exterior Adhesive Mount Product Data

2- to 3-mil cast vinyl film that combines flakes and pigments to create a frosted or etched effect on glass or other optically clear substrates; or on smooth surfaces, such as mirrors. The films feature a low gloss and a high degree of transparency, are printable, and can be cut by steel rule, thermal die-cutter or plotter.

Applications	Architectural, decorative, privacy, special effects, text/signage (printed or unprinted).
Composition	Cast vinyl
Adhesive	Permanent solvent acrylic
Vinyl Thickness (Including Adhesive)	2 to 3 mils (50 to 75 microns), ± 10%
Gloss Level in Gloss Units (GU)	At 60°: CrystalVue Silver & Glass EtchVue: 8 ±4; EtchVue: 30 ± 5
Release Liner	78# Bleached Kraft
Standard Width/Length	24 & 48 in. x 25 & 100 ft. (61 & 122 cm x 7.62 & 30.48 m). Custom sizes available.
Core Size	3 in.
Printing (Optional)	Solvent, eco-solvent, UV, thermal transfer or screen printing
Installation	Dry or wet; wet application recommended for larger graphics. Premasking is recommended for plotter-cut graphics with letters or designs that have cutouts within the design. Suitable for flat or moderately curved surfaces. Apply to clean surface. Use mild soap and water; rinse well. Do NOT use ammonia, Windex® or other solvent-based glass cleaner prior to application. For wet application, lightly spray the mounting surface with water or a suitable application fluid, remove liner, position the film as desired, and use a squeegee to remove water/fluid. Use a soft-edged squeegee designed specifically for wet application to prevent scratches and wrinkles. For detailed instructions, please refer to the CrystalVue™, EtchVue™ and Glass EtchVue™ Installation Instructions.
Minimum Application Temp.	40° F (4° C)
Repositionable	Yes, while film is still wet during wet application.
Outdoor Durability	5 years
Shrinkage & Gasoline Resistance	Excellent
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Other CrystalVue™ Products

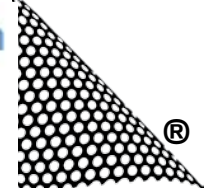|	
	CrystalVue is also available in Gold (CFCYVGD), Green (CFCYVGN), Blue (CFCYVB) and Rose (CFCYVR) by special order. Contact us for more information.

Subject to change without notice

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CurvaLam®

Product description:	CurvaLam is a 3-mil cast vinyl cold-laminating film with an optically clear, permanent pressure-sensitive adhesive. Designed to protect and prolong the life of printed images for window applications, CurvaLam is made of high-quality, 100% polymeric face stock. CurvaLam is rated for outdoor durability up to 2 years for external applications and 5 years for internal applications.
Areas of use:	• Protective overlaminate for CLEAR FOCUS One Way Vision™ calendered window graphics films. • Also compatible with cast print media. • Glass or transparent surfaces that are flat or have simple curves.
Standard roll sizes:	36, 54 & 60 in x 100 ft; 54 in x 25 ft (91.44, 137 & 152 cm x 30.48 m; 137 cm x 7.62 m)

CLEAR FOCUS CurvaLam® Optically Clear Cast PVC Overlaminating Film

Technical Data and Typical Characteristics

Product Code: CFCVL

PROPERTY	TEST METHODS	TYPICAL VALUE
Surface Finish	Gloss Meter 60° Reflection	60-90% (crystal)
Film Thickness (including adhesive)	Micrometer, Federal Bench Type	Approx. 3 mils (76.2 microns/0.003 in)
Release Liner Thickness		Approx. 1.5 mils (38.1 microns/0.0015 in)
Tensile Strength	Tensile Tester with 2-in (51 mm) jaw separation; crosshead speed of 12 in/min.(5.1 mm/s), web direction	≥4.5 lb/in (≥ 0.8 kg/cm)
Elongation	Instron Tensile Tester as above	≥150%
Shelf Life	2 years from ship date when stored at 70° F (21° C) and 50% relative humidity.	
Application Temperature Range	On clean, dry substrate (flat)	40° F to 100° F (4.4° C to 38° C)
Service Temperature Range	On clean, dry substrate	0° F to 140° F (-17° C to 60° C)
Dimensional Stability	158°F (70°C), 48 hours	5 mils (127 microns/0.005 in)
Peel Adhesion	PSTC-101, 15 min, 70°F (21°C)	3.5 lbs/in (0.625 kg/cm)
Liner Release	TLMI Release at 90°, 300 in/min (760 cm/min)	35 g/2 in width (7 g/1 cm width)

Subject to change without notice

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USA toll-free (800) 307-7990
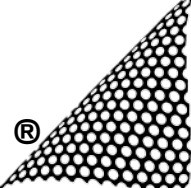
EasyCling™

Film:	2-mil gloss clear polyester on a 3-in. core
Standard roll size:	54 in. x 100 ft.
Application:	Point-of-purchase, retail, trade show, decorative, architectural and other window graphics applications
Product code:	CFEC

CLEAR FOCUS Imaging, Inc.

Interior/Exterior Clear Cling Product Data — Product Code: CFEC

2-mil clear polyester film treated for use with UV digital, UV screen and latex inks and conventional screen-print inks. Formulated using a special polymer technology, the film has static-cling-like properties and is easily peeled from the mounting surface.

Note: EasyCling is an unperforated window film.

Applications	Windows, glass doors, light boxes and other transparent or backlit surfaces. Ideally suited for point-of-purchase, retail, trade show and decorative applications. Can also be used as a protective film.
Features	Special polymer technology allows the film to cling to glass and other smooth surfaces; easy to apply, reposition and remove.
Composition	2-mil print-treated polyester
Release Liner	3-mil polyester traction back
Standard Widths/Lengths	54 in. x 100 ft. (1.37 x 30.48 m) Custom sizes available.
Color and Finish	Clear Gloss
Printing	Compatible with UV digital, UV screen and latex inks and screen printing. Double-sided printing is possible with printers having white-ink print capability.
Installation and Removal	Apply to clean surface. Use mild soap and water, rinse well. Do NOT use ammonia, Windex® or other solvent-based glass cleaner prior to application. Can be applied wet or dry. Wet application recommended for larger graphics. Lightly spray the mounting surface with water or a suitable application fluid, remove liner, position the poster as desired, and use a squeegee to remove water/fluid. During initial installation, graphic can be easily peeled from the mounting surface, repositioned and reapplied. Use a soft-edged squeegee to protect the graphic from scratches. For detailed instructions, please refer to the EasyCling installation instruction sheet.

Typical Characteristics

	15 min.	24 hr.
Target Cling Values (PSTC-1, 180° peel @ 12"/min., 73° F, on glass)	<1 oz./in.	<1 oz./in.
Minimum Application Temperature	32° F (0° C)	
Service Temperature Range	-40° F to +225° F (-40° C to +107° C)	
Shelf Life @ 73° F, 50% RH	2 years	
Outdoor Film Durability	2 years	

Chemical Resistance

Distilled Water (24 hr.)	No Effect
Detergent (24 hr.)	No Effect
Anti-Freeze (24 hr.)	No Effect
SAE 20 Motor Oil (24 hr.)	No Effect

Subject to change without notice

CLEAR FOCUS EasyCling™ Installation Instructions

Recommended tools:
- Soft-edged squeegee designed for wet or dry application
- Isopropyl alcohol (optional)
- Water or suitable application solution in a spray bottle
- Masking tape for creating 'hinges' and positioning graphic, if needed
- Clean cloth and lint-free towels
- Utility knife

Depending on the size of the graphic, EasyCling can be applied dry or wet using water or a suitable application fluid (e.g., a solution of water containing 2% mild liquid soap poured into a spray bottle). Wet application helps to prevent air bubbles from getting trapped between the film and the installation surface, and is recommended for graphics wider than about 18 inches.

During initial installation (wet or dry), EasyCling can be peeled easily from the mounting surface, repositioned and reapplied if needed.

Temperature of glass must be moderate — between approximately 40° F (5° C) and 90° F (32° C).

Preparation of Installation Surface

1. Wash the glass or other installation surface with mild soap and water. Rinse well with water. Do not use ammonia, Windex® or other solvent-based glass cleaner to clean the surface.
2. Moisten a clean cloth with isopropyl alcohol and wipe the surface to remove any residue. Dry with a lint-free towel.

Graphic Installation

1. Cut some strips of masking tape and have ready to attach to the top of the graphic to create a hinge, if needed.

2. For dry application of smaller graphics, position the graphic as desired and tape the top of it in place. Remove the liner and lower the graphic into position.

For wet application, lightly spray the installation surface with water or application fluid. Remove the liner from the graphic and position as desired.

3. Working from the center outward to the edges, squeegee the graphic using short, overlapping strokes to remove any trapped air bubbles, water or application fluid.

4. Wipe away any water or fluid and examine the graphic for any bubbles trapped under the surface. Use a squeegee to press and release any existing bubbles, and to squeegee the edges in place.

5. Remove the tape hinge from the graphic (if applicable).

It can take several days for any water to fully evaporate and the graphic to achieve clarity.

Questions? Call or email us with any product questions or for technical support.

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3/2014

EconoVue® 60/40

Perforation pattern:	Approx. 60/40 (40% open)
Perforation size:	Approx. 0.062 in. (1.6 mm)
Film:	Approx. 6-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 & 60 in. x 100 & 1000 ft.
Application:	POP, retail & commercial window graphics for short-term use
Product codes:	**CFEVSL/CFEVCL/CFEVDL**

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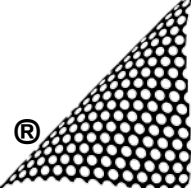
Exterior Mount Product Specifications   Product Codes: CFEVSL/CFEVCL/CFEVDL

6-mil white/black composite PVC with clear removable acrylic pressure-sensitive adhesive. Available with an unperforated solid paper liner (CFEVSL); a clear liner (CFEVCL) consisting of clear PET film laminated to perforated paper to absorb ink; or Do-ALLiner® (CFEVDL), a solid paper liner laminated to perforated paper.

Applications	Windows, glass doors or other transparent surfaces for short-term POP, retail window graphics or similar applications.
Composition	White/black composite PVC with clear pressure-sensitive adhesive and an unperforated solid paper release liner; a clear PET liner; or Do-ALLiner® (thickness of which may vary).
Open Area	40%, approx.
Vinyl Thickness (incl. adhesive)	6 mils (.006 in./153 microns), approx.
Release Liner Thickness	Solid paper liner: 6 mils (.006 in./153 microns), approx. Clear PET liner: 5.5 mils (.0055 in./140 microns), approx. Do-ALLiner®: 7 mils (.007 in./178 microns), approx.
Adhesive Thickness	.5 mils (.0005 in./13 microns), approx.
Perforation Diameter	.062 in. (1.6 mm), approx.
Standard Widths/Lengths	54 & 60 in. x 100 & 1000 ft. (137 & 152 cm. x 30.48 & 304.8 m) 60 in. available only with solid paper liner or clear PET liner. Custom sizes available by special order.
Dimensional Stability	Fair
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (–17° C to 60° C)
Expected Lifetime Exterior	Up to 1 year; 3 months for clean removal. Adhesion may increase with time. Testing recommended before production to determine suitability of product for intended application.
Water Resistance	Fair. Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Fair
Storage Stability	6-month shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on print side and black on adhesive side.
Printing	Use standard vinyl inks. Print image on vinyl, not on the release liner. EconoVue with the solid paper liner is compatible with screen printing; inkjet printing using solvent, eco-solvent and mild solvent inks; latex; thermal transfer; and airbrushing. EconoVue with the clear PET liner is compatible with UV-cure inks and above printing methods except latex inks. The Do-ALLiner® is compatible with all imaging methods above.
Installation	Apply to clean, dry glass surface. Use plain soap and water, rinse and dry glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners prior to application.
Removal	Remove by peeling from surface. Remove adhesive residue on older installations, if necessary.

Other EconoVue Products

Other EconoVue Products	Other economy-grade products featuring different perforation patterns, diameters, release liners, and roll sizes are available by special order.

Subject to change without notice

EconoVue® 70/30

Perforation pattern:	Approx. 70/30 (30% open)
Perforation size:	Approx. 0.055 in. (1.4 mm)
Film:	Approx. 6-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 & 60 in. x 100 ft.
Application:	POP, retail & commercial window graphics for short-term use
Product code:	CFEVSL/CFEVCL

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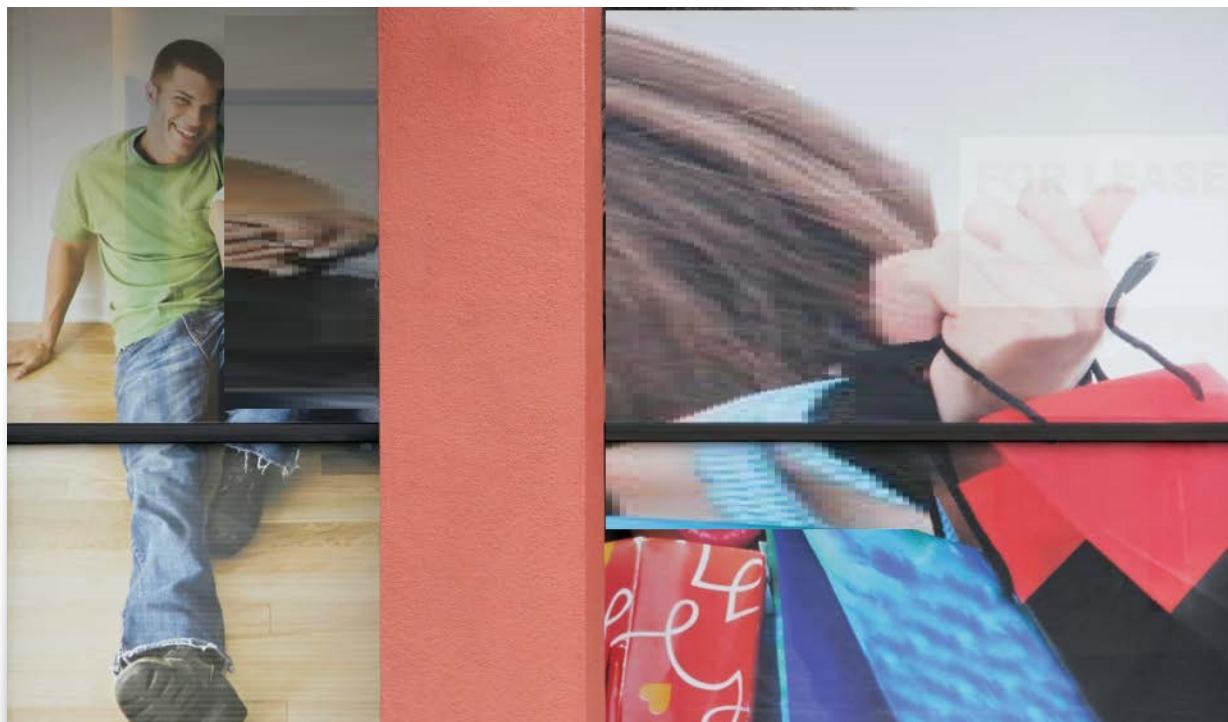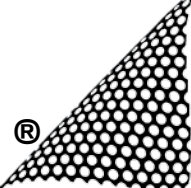
CLEAR FOCUS EconoVue® 70/30 FILM
Flexible Vinyl

Exterior Mount Product Specifications
Product Code: CFEVSL/CFEVCL

6-mil white/black composite PVC with clear removable acrylic pressure-sensitive adhesive. Available with an unperforated solid paper liner (CFEVSL) or a clear liner (CFEVCL) consisting of clear PET film laminated to perforated paper to absorb ink.

Applications	Windows, glass doors or other transparent surfaces for short-term POP, retail window graphics or similar applications.
Composition	White/black composite PVC with clear pressure-sensitive adhesive and an unperforated solid paper release liner or a clear PET liner (thickness of which may vary).
Open Area	30%, approx.
Vinyl Thickness (incl. adhesive)	6 mils (.006 in./153 microns), approx.
Release Liner Thickness	Solid paper liner: 6 mils (.006 in./153 microns), approx. Clear PET liner: 5.5 mils (.0055 in./140 microns), approx.
Adhesive Thickness	.5 mils (.0005 in./13 microns), approx.
Perforation Diameter	.055 in. (1.4 mm), approx.
Standard Widths/Lengths	54 & 60 in. x 100 ft. (137 & 152 cm. x 30.48) 60 in. available only with solid paper liner. Custom sizes available by special order.
Dimensional Stability	Fair
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (–17° C to 60° C)
Expected Lifetime Exterior	Up to 1 year; 3 months for clean removal. Adhesion may increase with time. Testing recommended before production to determine suitability of product for intended application.
Water Resistance	Fair. Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Fair
Storage Stability	6-month shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on print side and black on adhesive side.
Printing	Use standard vinyl inks. Print image on vinyl, not on the release liner. EconoVue with the solid paper liner is compatible with screen printing; inkjet printing using solvent, eco-solvent and mild solvent inks; latex; thermal transfer; and airbrushing. EconoVue with the clear PET liner is compatible with UV-cure inks and above printing methods except latex inks.
Installation	Apply to clean, dry glass surface. Use plain soap and water, rinse and dry glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners prior to application.
Removal	Remove by peeling from surface. Remove adhesive residue on older installations, if necessary.

Other EconoVue Products

Other EconoVue Products	Other economy-grade products featuring different perforation patterns, diameters, release liners, and roll sizes are available by special order.

Subject to change without notice

EconoVue®
Clear Interior

Perforation pattern:	Approx. 60/40 (40% open)
Perforation size:	Approx. 0.062 in. (1.6 mm)
Film:	Approx. 6.5-mil clear calendered PVC on a 3-in. core
Standard roll sizes:	54 in. x 100 ft.
Application:	POP, retail & commercial window graphics designed for interior mounting
Product code:	**CFEVISL/CFEVIWL/CFEVIDL**

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CLEAR FOCUS Imaging, Inc.

CLEAR FOCUS EconoVue® Clear Interior FILM   Flexible Vinyl
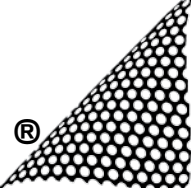
Interior Mount Product Specifications   Product Code: CFEVISL/CFEVIWL/CFEVIDL

6.5-mil clear PVC with clear removable acrylic pressure-sensitive adhesive. Available with an unperforated solid paper release liner (CFEVISL); a white PET liner (CFEVIWL) consisting of white PET film laminated to perforated paper; or Do-ALLiner® (CFEVIDL), a solid paper liner laminated to perforated paper.

Applications	POP, retail and other graphics for interior mounting on windows, glass doors and other transparent surfaces. *Not recommended for use on tinted windows.*
Composition	Clear PVC with clear pressure-sensitive adhesive coating and an unperforated solid paper liner, a white PET liner, or Do-ALLiner®.
Open Area	40%, approx.
Vinyl Thickness (incl. adhesive)	6.5 mils (.0065 in./165 microns), approx.
Release Liner Thickness	7 mils (.007 in./178 microns), approx.
Adhesive Thickness	1 mil (.001 in./25 microns), approx.
Perforation Diameter	.062 in. (1.6 mm), approx.
Standard Width/Length	54 in. x 100 ft. (1.37 x 30.48 m)
Dimensional Stability	Good
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (-17° C to 60° C)
Expected Lifetime	Up to 1 year. 6 months for clean removal. Adhesion may increase with time.
Water Resistance	Fair. Immersion in water not recommended.
Humidity Resistance	Fair
Solvent Resistance	Good
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity.
Printing	Print on clear film, not on liner. Designed for screen printing, UV-cure printing or other method that allows printing mirror image with the color sequence printed in reverse, followed by the application of a full coat of white ink and then a full coat of black ink to achieve one-way visibility.
	Recommended ink temperature: 65° to 82° F (18° to 28° C), approx.
	For UV-cure printing, choose the white PET liner or Do-ALLiner®.
	When printing with UV-cure inks, less ink laydown may be needed to prevent the holes from clogging. This is especially applicable when running multiple passes using the highest resolution setting. Test-printing prior to production is recommended to determine the optimal ink density.
	For a softer, more translucent effect without one-way visibility, it is possible to print normally without adding the white and black coats of ink. In this case, any text will display in reverse on one side.
Installation	Apply to clean, dry glass surface. Use mild soap and water, rinse and dry glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners prior to application.
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Subject to change without notice

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USA toll-free (800) 307-7990

ImageJetVue®

Perforation pattern:	Approx. 65/35 (35% open)
Perforation size:	0.06 in. (1.5 mm)
Film:	8-mil calendered PVC with an inkjet-receptive top coating on a 2-in. core
Standard roll sizes:	36 & 54 in. x 50 ft.
Application:	Decals, POP/retail posters, other small-format & graphics-intensive window signage

Product code: CFIJVWL

JetVue®

Perforation pattern:	Approx. 50/50 (50% open)
Perforation size:	0.08 in. (2.0 mm)
Film:	8-mil calendered PVC with an inkjet-receptive top coating on a 2-in. core
Standard roll sizes:	36 & 54 in. x 50 ft.
Application:	POP posters, retail & commercial window signage

Product code: CFJVWL

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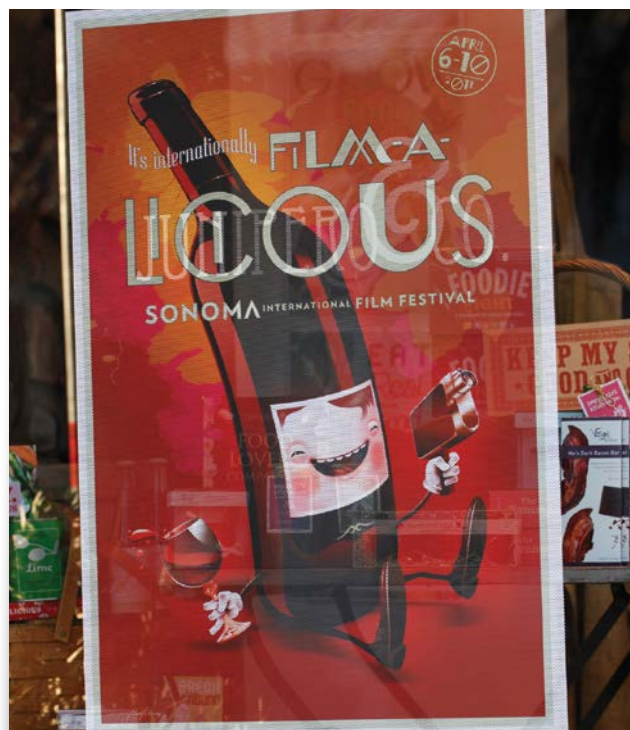
CLEAR FOCUS Imaging, Inc.
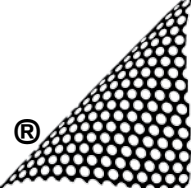
CLEAR FOCUS ImageJetVue® FILM	Product code: CFIJVWL
CLEAR FOCUS JetVue® FILM	Product code: CFJVWL

Exterior Adhesive Mount, Aqueous InkJet–Compatible Product Specifications

8-mil white/black composite PVC with removable clear acrylic pressure-sensitive adhesive and a patented release liner consisting of white PET film laminated to perforated paper to absorb ink and to facilitate sensing of media by printer.

Applications	Windows, glass doors or other transparent surfaces.
Composition	White/black PVC laminate with clear pressure-sensitive adhesive coating and a patented release liner consisting of white PET film laminated to perforated paper. Features an ultra-thin, aqueous inkjet-receptive top coat.
Open Area	ImageJetVue: 35% (approx.); JetVue: 50% (approx.)
Vinyl Thickness (incl. adhesive)	8 mils (.008 in./203 microns), approx.
Release Liner Thickness	7 mils (.007 in./178 microns), approx.
Adhesive Thickness	1 mil (.001 in./25 microns), approx.
Perforation Diameter	ImageJetVue: .060 in. (1.5 mm); JetVue: 0.80 in. (2.0 mm)
Standard Widths/Lengths	36 & 54 in. x 50 ft. (91.44 & 137 cm x 15.24 m) Custom sizes available by special order.
Dimensional Stability	Good
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (–17° C to 60° C)
Expected Lifetime Exterior	12-18 months. 6 months for clean removal. Adhesion may increase with time.
Expected Image Lifetime	Varies according to ink type, use of clear coat or overlaminate, and conditions under which image is displayed. Lamination is recommended for outdoor use. Conduct test prior to production.
Water Resistance	Immersion in water not recommended. If exposed to rain, the use of an optically clear, compatible overlaminate is recommended to protect the graphics and to prevent holes from filling with water.
Humidity Resistance	Fair
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on print side and black on adhesive side.
Printing	Designed for pigmented or dye-based aqueous inkjet inks. Print image on vinyl side of product, not on the release liner.
Application	Apply to dry, clean glass surface. Use mild soap and water, rinse and dry the glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners prior to application. Note: JetVue is not recommended for use on vehicles because of the comparatively short life span of aqueous inkjet inks. ImageJet-Vue is not for use on vehicle windows because of reduced visibility.
Removal	Remove by peeling from surface. Remove adhesive residue on older installations, if necessary.

Other JetVue/ImageJetVue Products

With a Solid Paper Liner Codes: CFJVSL/CFIJVSL	Features an unperforated solid paper liner for use with certain printers that have a media-detection sensor (e.g., HP Z6100/Z6200). Custom order.

Subject to change without notice

create

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ImageVue®

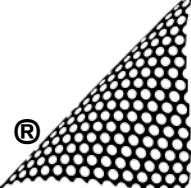|	
Perforation pattern:	Approx. 65/35 (35% open)
Perforation size:	0.06 in. (1.5 mm)
Film:	8-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 in. x 25 ft.
	54 & 60 in. x 100 & 1000 ft.
Application:	Decals, POP/retail posters, other small-format & graphics-intensive window signage
Product code:	CFEABWIV

CLEAR FOCUS Imaging, Inc.

CLEAR FOCUS ImageVue® FILM   Flexible Vinyl

Exterior Mount Product Specifications   Product Code: CFEABWIV

8-mil white/black composite PVC with clear removable acrylic pressure-sensitive adhesive and a release liner consisting of clear PET film laminated to perforated paper to absorb ink.

Applications	Windows, glass doors or other transparent surfaces.
Composition	White/black PVC with clear pressure-sensitive adhesive coating and a release liner consisting of clear PET film laminated to perforated paper to absorb ink..
Open Area	35% (approx.)
Vinyl Thickness (incl. adhesive)	8 mils (.008 in./203 microns), approx.
Release Liner Thickness	7 mils (.007 in./178 microns), approx.
Adhesive Thickness	1 mil (.001 in./25 microns), approx.
Perforation Diameter	.060 in. (1.5 mm)
Standard Widths/Lengths	54 & 60 in. x 100 & 1000 ft. (1.37 & 1.52 x 30.48 & 304.8 m); 54 in. x 25 ft (1.37 x 7.62 m) Custom sizes available by special order.
Dimensional Stability	Good
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (–17° C to 60° C)
Expected Lifetime Exterior	2 to 3 years. 6 months for clean removal. Adhesion may increase with time.
Water Resistance	Fair. Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Good
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on print side and black on adhesive side.
Printing	Use standard vinyl inks. Print on the vinyl side, not on the release liner. Compatible with screen printing; inkjet printing using solvent, eco-solvent, mild solvent, latex (with solid paper liner) and UV-cure inks; thermal transfer; electrostatic transfer; and airbrushing.
Application	Apply to clean, dry glass surface. Use plain soap and water, rinse and dry glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners prior to application. **Not for use on vehicle windows because of reduced visibility**.
Removal	Remove by peeling from surface. Remove adhesive residue on older installations, if necessary.

Other ImageVue Products

ImageVue with a White PET Liner Code: CFEABWIVWL	Features a patented white PET liner consisting of white PET film laminated to perforated paper to absorb ink and to facilitate sensing of media by printer. Compatible with all printing methods listed above, except latex inks. Custom order.
ImageVue with a Solid Paper Liner Code: CFEABWIVSL	Features an unperforated solid paper liner. Recommended for latex inks. Not compatible with UV-cure printers. Custom order.

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USA toll-free (800) 307-7990

Important Tips on Laminating & Installing CLEAR FOCUS Window Films

Performing a test prior to actual production can minimize costly errors, uncover compatibility issues, and help ensure the success of your project. Ideally such tests should cover all phases of the production process: Printing, which includes allowing inks sufficient time to outgas; laminating (if applicable), which includes allowing adequate bonding between the overlaminate and the window film; and installation, which includes proper prep of the installation surface and following the recommended installation temperature guidelines. As part of the test, make sure that any overlaminate, clear coat or other product used is compatible with perforated window graphics film, maintains the film's one-way visibility, and is suitable for the application (including curvature of surface).

Laminating is as much an art as a science. Laminating and installing are challenging because streaks and marks caused by uneven pressure applied by laminator rollers or manually by hand or squeegee can occur yet be difficult to see until after the graphic is installed. To prevent post-lamination issues (wrinkling, tunneling), make sure there is proper tension on the laminator unwind/rewind rollers so that neither the overlaminate nor the film is stretched during lamination. Also ensure that there are no uneven areas on the laminator rollers (caused by bowing of the nip rollers, a common problem with hot laminators) or other problems that could cause streaks or marks.

CLEAR FOCUS offers a choice of two pressure-sensitive (cold), cast, conformable PVC overlaminates — PromoLam™ and CurvaLam® — which are designed for perforated window graphics to be installed on flat or simple-curved surfaces. We recommend the use of PromoLam or CurvaLam with our PVC window films because the products' chemical composition and physical properties are so similar.

Designed for small-format graphics to be mounted on flat surfaces only, our ClearLam® overlaminate is thinner than PromoLam and CurvaLam and made of polyester, and therefore does not mate as well with PVC window films. We offer ClearLam primarily as a lower-cost alternative for print shops experienced in laminating.

Before Installing Graphics
• After printing graphics, allow at least 24 hours for the inks to dry and outgas prior to applying overlaminate (not required when using UV-cure or latex inks).
• After applying an overlaminate, let the graphics sit for at least 12 hours to allow the overlaminate's adhesive time to bond adequately to the vinyl film.

Installing Graphics on Curved Surfaces
• Start in the center of the window and install from the center outward to the edges of the glass.

• Peel back part of the release liner and make a V-shaped cut in it (from the top edge of the liner toward the center) to keep the liner out of the way during installation. *Be careful not to cut the film!*

• Avoid stretching the PVC film during installation. The film has a memory and, if stretched, may return to its original shape, causing it to lift off the glass later.

• Avoid using an overlaminate on window graphics to be installed on surfaces with compound curves. For such applications we recommend a clear coat/liquid laminate. Even conformable overlaminates such as PromoLam and CurvaLam add more thickness and rigidity, making it harder to install the graphics on windows with extreme curves.

• If you must laminate the graphics (e.g., to prevent the film's holes from filling with water when it rains), leave the outside edge — approx. 1/4 inch — around the graphics unlaminated. That way the center portion of the graphics will be laminated and the unlaminated edges will be more pliable and will conform more easily at the edges, where the curvature of the glass is more pronounced.

• If a heat gun is used to install graphics around curves, do not exceed 250°F and apply heat for only a few seconds at a time. Applying too much heat and tension during installation can stretch the film out of shape and deform the holes, as well as negatively impact the film's adhesive properties.

• Use an edge sealer. If the edges of the film have been handled a lot or have been stretched — both of which can adversely affect the film's adhesive — an edge sealer will help prevent them from lifting.

• If all else fails, try using an optically clear overlaminate that's thinner and more conformable than CurvaLam or PromoLam. Check with your distributor for the names of overlaminating films that are compatible with perforated window film and designed for use on compound surfaces.

STATE WINDOW TINTING RULES & LAWS

IWFA INTERNATIONAL WINDOW FILM ASSOCIATION®

ST	YEAR LAW ENACTED	TYPE	% OF VISIBLE LIGHT TRANSMISSION WIND-SHIELD	F.SIDE	B.SIDE (car)	B.SIDE (MPV)	REAR (car)	REAR (MPV)	% OF REFLECTIVITY F.SIDE *(SEE LEGEND)*	B.SIDE *(SEE LEGEND)*	RESTRICTED COLORS ALL GLASS *(SEE LEGEND)*	L&R.MIRR. REQ.	CERTIF. REQ.	STCKR/LOC	MEDICAL	Tolerance %
AL	96	NET	6"	32	32	ANY	32	ANY	20	20	N/S	NO	YES	SPEC / ALL	YES	3%
AK	94	NET	5"	70	40	ANY	40	ANY	NMMA	NMMA	R,A,Y	NO	NO	NO	YES	
AZ	94	NET	AS1	33	ANY	ANY	ANY	ANY	35	35	R, A	YES	NO	NO	YES	3%
AR	93	NET	5"	25	25	10	10	10	NR	NR	N/S	NO	NO	SPEC / DRIVER	YES	3%
CA	99	NET	4"	70	ANY	ANY	ANY	ANY	MNIR	MNIR	R, A, B	YES	NO	NO	YES*	
CO	95	NET	4"	NO	ANY	ANY	ANY	ANY	NMMA	NMMA	R, A	NO	NO	NO	NO	3%
CO	95	NET	4"	27	27	27	27	27	NMMA	NMMA	R, A	YES	NO	RECOMMEND	NO	
CT	94	NET	AS1	35	35	ANY	ANY	ANY	21	27	N/S	YES	YES	SPEC/ALL	NO	3%
DE	92	NET	AS1	70	ANY	ANY	ANY	ANY	NR	NR	N/S	YES	NO	SPEC / DRIVER	YES	
FL	2005	NET	AS1	28	15	6	15	6	25	35	ALL	YES	NO	SPEC / DOOR	YES	
GA	2005	NET	6"	32	32	ANY	32	ANY	20	20	R, A	NO	NO	NO	YES	3%
HI	2010	NET	70	35	35	ANY	35	ANY	NR	NR	N/S	YES	NO	NO	NO	6%
IA	83	NET	AS1	70	ANY	ANY	ANY	ANY	NE	NE	N/S	NO	NO	NO	YES	
ID	92	FILM	AS1	35	20	ANY	35	ANY	35	35	N/S	YES	NO	NO	YES	3%
IL*	2009	NET	6"	*See	Addendum				MBNR	MBNR	N/S	YES	NO	NO	YES	5%
IN	2003	VAGUE	AS1	30	30	VAGUE	30	VAGUE	25	25	N/S	NO	YES	NO	YES	
KS	87	NET	AS1	35	35	35	35	35	MBNR	MBNR	R, A, Y	YES	NO	RECOMMEND	NO	
KY	94	FILM	AS1	35	18	8	18	8	25	25	N/S	NO	YES	SPEC/DOOR	NO	
LA	2006	NET	AS1	40	25	ANY	12	ANY	20	20	N/S	NO	YES	SPEC / DRIVER	YES	
MA	85	NET	6"	35	35	35	35	35	35	35	N/S	YES	NO	RECOMMEND	YES	
ME	2007	NET	AS1	35	ANY	ANY	ANY	ANY	MBNR	MBNR	N/S	YES	YES	NO	YES	
MD	95	NET	5"	35	35	ANY	35	ANY	NONE	NONE	R, A, Y	YES	YES	SPEC/ALL	YES	
MI	2000	NET	4"	4"	ANY	ANY	ANY	ANY	35	35	N/S	NO	NO	NO	YES	
MN	85	VAGUE	NO	50	50	***V	50	***V	20	20	N/S	NO	NO	SPEC/DRIVER	YES	3%
MO	2002	NET	ASI	35	ANY	ANY	ANY	ANY	35	35	N/S	YES	NO	NO	YES	3%
MS	2006	NET	AS1	28	28	ANY	28	ANY	20	20	N/S	NO	YES	SPEC / ALL	YES	
MT	1995	FILM	AS1	24	14	ANY	14	ANY	35	35	***R, A, Y	NO	NO	RECOMMEND	YES	
NC	2001	NET	AS1	35	35	ANY	35	ANY	20	20	R, A, Y	YES	NO	NO	YES	
ND	2003	NET	70	50	ANY	ANY	ANY	ANY	NR	NR	N/S	YES	NO	NO	NO	
NE	2006	NET	AS1 OR 5"	35	20	35	20	35	35	35	***R, A, Y	VAGUE	NO	NO	YES	
NH	97	NET	6"	NO	35	ANY	35	ANY	NR	NR	N/S	YES	NO	RECOMMEND	YES	
NJ	2003	NET	NO	NO	ANY	ANY	ANY	ANY	NMMA	NMMA	N/S	YES	NO	NO	YES	
NM	97	NET	AS1 OR 5"	20	20	ANY	20	ANY	NONE	NONE	***R, A, Y	YES	YES	SPEC / ALL	YES	
NV	93	NET	AS1	35	ANY	ANY	ANY	ANY	NONE	NONE	N/S	YES	YES	NO	YES	
NY	91	NET	6"	70	70	ANY	ANY	ANY	NR	NR	N/S	YES	NO	SPEC/ALL	YES	
OH	2004	NET	70	50	ANY	ANY	ANY	ANY	NMMA	NMMA	R,Y	YES	YES	SPEC/ALL	YES	3%
OK	2005	NET	AS1 OR 5"	25	25	ANY	25	ANY	25	25	N/S	YES	YES	NO	YES	
OR	2003	NET	6"	35	35	ANY	35	ANY	13	13	R,G,A,Y,BK	YES	YES	NO	YES	
PA	99	NET	NO	70	70	ANY	70	ANY	NR	NR	N/S	YES	NO	SPEC/REAR	YES	
RI	2000	NET	AS1	70	70	ANY	70	ANY	NONE	NONE	N/S	NO	NO	NO	YES	
SC**	92	NET	AS1	27	27	ANY**	27	ANY	MBNR	MBNR	R, A, Y	YES	YES	SPEC / ALL	YES	
SD	94	NET	AS1	35	20	NR	20	NR	NR	NR	N/S	NO	YES	SPEC / ALL	YES	
TN	90	FILM	AS1	35	35	ANY	35	ANY	NR	NR	N/S	NO	NO	SPEC/DRIVER	YES	
TX	2003	NET	AS1 OR 5"	25	25	ANY	ANY	ANY	25	25	R,B, A	YES	YES	SPEC / ALL	YES	
UT	2005	NET	AS1	43	ANY	ANY	ANY	ANY	NMMA	NMMA	N/S	YES	NO	NO	YES	
VT	84	NET	AS1	NO	ANY	ANY	ANY	ANY	NR	NR	N/S	YES	NO	NO	NO	
VA	99	NET	AS1	50	35	ANY	35	ANY	20	20	R, A, Y	YES	NO	NONE	YES	7%
WA	2009	NET	6"	24	24	ANY	24	ANY	35	35	R, Y, G, BK	YES	YES	SPEC / DRIVER	YES	3%
WI	96	NET	AS1	50	35	35	35	35	MBNR	MBNR	N/S	YES	NO	NO	YES	
WV	91	NET	5"	35	35	ANY	35	ANY	20	20	R, A, Y	YES	YES	SPEC / ALL	YES	
WY	96	NET	AS1 OR 5"	28	28	ANY	28	ANY	20	20	N/S	YES	NO	NO	YES	
Wash., DC		NET	AS1 OR 5"	70	50	35	50	35							YES	

This information is prepared for IWFA members by the Legislative Committee and consultants and represents our understanding of the law, regulations and rules of the states published in it. If you are an IWFA member and you have questions on these interpretations, call the IWFA office. In all cases, refer to your local authority for current laws, rules or regulations. Your current state law is the final authority.

* Medical Exemption Day Time Only   **Pick-Up Trucks are not considered MPV's   ***Above AS1 only
***V---"exemption for vans and pickups (50%) with SUV replacement at factory level only"

LEGENDS:
NET = VLT% refers to the combined LT of film and glass.   **FILM** = VLT% refers to LT of film product prior to installation.
Reflectivity: NR = NOT REGULATED, **NE** = NOT EXCESSIVE (NOT SPECIFIC), **MBNR** = MUST BE NON - REFLECTIVE (NOT SPECIFIC),
MNIR = MUST NOT INCREASE REFLECTIVITY, **NMMA** = NO METALLIC OR MIRRORED APPEARANCE, **NONE** =NO REFERENCE
TO REFLECTIVITY IN THE CURRENT LAW.
Colors: R = RED, **A** = AMBER, **Y** = YELLOW, **B** = BLUE, **G** = Gold, **BK** = BLACK, **N/S** = NOT SPECIFIED,

Solvent and UV Printers with Mesh Mode

The following printers have a mesh mode or other mechanism that allows for printing substrates, such as DuoVue™, that do not have a release liner to catch overspray. Other printers not listed may also be compatible with DuoVue.

Manufacturer	Model Name/Number	Roll-to-Roll Capability
Agfa	:Jeti 3312 Solvent RTR	Yes
Agfa	:Jeti 3324 Solvent RTR	Yes
Agfa	:Jeti 3348 HSS High Speed Solvent	Yes
Durst	Rho 320R UV	Yes
Durst	Rho 500R UV	Yes
EFI VUTEk	GS3250r UV	Yes
EFI VUTEk	GS5000r UV	Yes
HP Scitex	XP2500 UV	Yes
HP Scitex	XP2700 UV	Yes
HP Scitex	XP5500 UV	Yes
Polytype	Virtu RS 25 UV	Yes
Polytype	Virtu RS 35 UV	Yes
Polytype	Virtu RR 50 UV	Yes
Printer Revolution	Evo33 LoSol Solvent	Yes
Seiko	SII Color Painter H-104s Low-Solvent	Yes
Seiko	SII Color Painter H-74s Low-Solvent	Yes
Teckwin	Teckpro UV3200	Yes

DuoVue has been tested successfully on the following printer:

- Vutek GS3200 UV Digital Press — Required masking one side, printing, then masking the printed (2nd) side to allow double-sided printing.

The above information is based on specifications and technical data sheets issued by the referenced printer manufacturers. The data is believed to be reliable and is presented for reference purposes only. The data does not constitute a representation or a warranty relating to the suitability of the print substrate or the printer for a particular application or otherwise create guarantees of compatibility or product performance. In all cases, purchasers should independently verify, prior to use, the compatibility and suitability of the print substrate and the respective printer for their specific application.

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B.C.I.
IMAGING

7/2013

MATERIAL SAFETY DATA SHEET

1.   CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name: Clear Focus Imaging, Inc.
Address: 60 Maxwell Court
City, State, and Zip: Santa Rosa CA 95401
Emergency Telephone Number: (707) 544-7990
Other Information Calls: (707) 544-1886
Date Prepared: October 1, 2002

Material Identity
Name: ClassicVue-CFEABW, SuperVue-CFEABWSV, ImageVue-CFEABWIV

2.   COMPOSITION/INFORMATION ON INGREDIENTS

Film: Polyvinyl chloride
Adhesive: Permanent solution acrylic
Liner: Kraft siliconized one-side

3.   HAZARDS IDENTIFICATION

Potential Health Effects and First Aid Measures
Eye: Adhesive may cause mild eye irritation. If possible, carefully remove from eye tissue and flush
                eyes with water or buffered saline solution. Seek medical attention.
Skin: Adhesive may cause mild skin irritation. Remove product immediately and wash affected area with
                soap and water. Seek medical attention.
Swallowing: Choking may occur when swallowed. Provide appropriate steps to remove item from the airway.
Inhalation: Not likely.

4.   FIRE FIGHTING MEASURES

Hazardous Products of Combustion: Carbon dioxide, carbon monoxide, various hydrocarbons

Extinguishing Media: Water, regular foam, carbon dioxide, dry chemical

5.   ACCIDENTAL RELEASE MEASURES

Solid product. Accidental release is not possible.

6.   HANDLING AND STORAGE

Handling: Standard safe material handling procedures are recommended.
Storage: Product should be stored at 50% relative humidity and at temperatures from 50º F
                (10º C) to 90º F (33º C).

7.   EXPOSURE CONTROLS AND PERSONAL PROTECTION

No special measures are necessary with proper use of product.

8.   PHYSICAL AND CHEMICAL PROPERTIES

Form: Solid   pH: 7.0 (adhesive)
Color: White   Flash point: not applicable with proper use
Odor: None

8.   **PHYSICAL AND CHEMICAL PROPERTIES (cont.)**

Explosion limits: Upper – none
                            Lower – none
Ignition temperature: Not applicable with proper use
Vapor pressure: Not applicable

9.   **STABILITY AND REACTIVITY**

Thermal decomposition: None with proper use
Hazardous reaction: None with proper use

10.   **TOXICOLOGICAL INFORMATION**

The product yields no harmful health effects with proper use.

11.   **ECOLOGICAL INFORMATOIN**

The product yields no harmful environmental effects with proper use.

12.   **DISPOSAL CONSIDERATION**

The product may be disposed of with domestic solid waste in accordance with local regulations.

13.   **TRANSPORT/REGULATORY INFORMATION**

The product is not regulated for labeling or transportation.

14.   **OTHER INFORMATION**

The information provided herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

F:Off/Mast/MSDS-r

PosterVue®

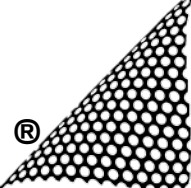|	
Perforation pattern:	Approx. 65/35 (35% open)
Perforation size:	Approx. 0.06 in. (1.5 mm)
Film:	Approx. 12-mil calendered non-adhesive PVC on a 3-in. core
Standard roll sizes:	54 in. x 25 & 100 ft.
Application:	Decals, POP/retail posters, other small-format & graphics-intensive window signage
Product code:	CFNAPV

CLEAR FOCUS Imaging, Inc.

Exterior/Interior Mount Product Specifications   **Product Code: CFNAPV**

12-mil white/black composite, non-adhesive PVC film with an adhesive-coated solid release liner.

Applications	Windows, glass doors or other transparent surfaces for POP, retail window graphics or similar applications.
Composition	Composite white/black PVC laminate
Open Area	35% (approx.)
Vinyl Thickness	12 mils (.012 in./304 microns), approx.
Release Liner	Adhesive-coated solid release liner
Perforation Diameter	.060 in. (1.5 mm), approx.
Standard Widths/Lengths	54 in. x 25 & 100 ft. (1.37 x 7.62 & 30.48 m) Custom sizes available by special order.
Dimensional Stability	Good
Minimum Application Temperature	Depends on mounting materials/method used.
Expected Lifetime Exterior	Up to 1 year. Service life depends on mounting materials/method used to attach poster to glass surface.
Water Resistance	Good. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Good
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity.
Colors Available	White on print side and black on see-through side.
Printing	Use standard vinyl inks. Print on the vinyl side, not on the release liner. Compatible with screen printing; inkjet printing using solvent, eco-solvent and mild solvent inks; thermal transfer; and airbrushing. Testing is recommended with latex printers. Not UV-cure compatible.
Mounting	Attach to the interior or exterior surface of clean, dry glass door or window using clear transfer adhesive, such as CLEAR FOCUS AdHereVue®. Full coverage of AdHereVue is recommended to prevent lifting of poster edges. Other options include CLEAR FOCUS Tack'em™Tape 1 single-sided tape, Tack'em™Tape 2 double-sided tape, double-sided self-adhesive tabs, or other suitable poster attachment method available on the market.

Subject to change without notice

CLEAR FOCUS Aqueous Inkjet Printer Compatibility

- Satisfactory print results were achieved with the various settings listed below.
- As this is only a partial list of compatible printers, please contact us if you do not see your printer model listed.
- The suggested profiles and settings are based on tests believed to be reliable and are presented for reference purposes only.
- In some cases more than one media profile may provide satisfactory print results.
- The use of a compatible overlaminate (e.g., PromoLam or CurvaLam) is highly recommended for outdoor window graphics that will be subjected to moisture to prevent the aqueous inks from running.
- The information does not constitute a representation or warranty relating to the suitability of a product for a particular application or otherwise create guarantees of product performance. Purchasers are advised to conduct their own tests to verify compatibility and to determine the suitability of the product for their specific application and printing method.

Requires CLEAR FOCUS JetVue® or ImageJetVue® topcoated film

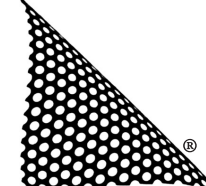| Mfg & Model (RIP used, if applic.)	Suggested Profile	Suggested Settings	Notes
Canon iPF 8300	Vinyl Matte		Vinyl Matte may provide brighter colors; testing recommended
Canon iPF 8400	Extra Heavyweight media	Normal	
Encad NovaJet 500, 700, 750, 850	Standard		Allow inks sufficient time to dry
Epson 9900/9700	*On printer side:* Luster 260 paper	*On driver side:* Photo Black; Velvet Fine Art paper; Color Density -5; No Color Adjustment	
Epson 9600	Premium Photo Glossy Paper	Standard settings using printer driver: Fine 720 dpi, High Speed, Photo-realistic, Density +0%	
Epson 1000			
HP Z6100, Z6200			May perform better with unperforated solid paper liner (custom order) due to position of media sensor
HP 2000, 2500, 3000, 3500, 5000	Heavy Coated Paper, HP Best Mode or Best Photographic Mode		See profiles on website for HP CP UV, HP 5000UV & HP5000 dye
HP 5500 ps UV	Non-HP Vinyl		
Mimaki JV2-130, JV2-160, JV2-180, JV-900, JV-1300			

CLEAR FOCUS Printer Compatibility

- Satisfactory print results were achieved with the various settings listed below. In some cases as noted, additional information may be available.
- As this is only a partial list of compatible printers, please contact us if you do not see your printer model listed.
- For UV-cure printers, we recommend one of our PET liners or Do-ALLiner®. The solid paper release liner is not compatible with UV-cure inks.
- For HP L25500, L26500 and L28500, the paper release liner or Do-ALLiner is recommended.
- In addition to print technologies and specific printer/press models listed below, most CLEAR FOCUS films are also compatible with traditional screen printing, thermal transfer, airbrushing, and other imaging methods. Please see the individual product data sheet for compatibility data.
- The suggested profiles and settings are based on tests believed to be reliable and are presented for reference. Heat settings are approximate.
- In some cases more than one media profile may provide satisfactory print results.
- The information does not constitute a representation or warranty relating to the suitability of a product for a particular application or otherwise create guarantees of product performance. Purchasers are advised to conduct their own tests to verify compatibility and to determine the suitability of the product for their specific application and printing method.

UV-Cure Flatbed/Roll-to-Roll

Compatible with CLEAR FOCUS films having a clear or white PET liner or Do-ALLiner® (not compatible with PosterVue or with films having an unperforated solid paper liner)

Mfg & Model (RIP used if applic./known)	Suggested Profile	Settings, Inks, Etc.	Notes
Agfa Solara ION models V & X		uses Cold Fire Cure™ technology	
Arizona 550 UV-cure flatbed			Tested with EconoVue Clear Interior with white PET liner, with image printed in reverse and white & black coats subsequently added for one-way visibility.
3M 2500 UV	423x600 plv vinyl	UV lamp cure power: High	
Durst Rho 160R UV (Caldera GrandRip)			
EFI Vutek PressVu 180		Lamp setting: 30% SC / Printhead: 65 or 70 / Speed: 60 IPS	
EFI Vutek PressVu 200		Speed: Max / Smoothing: Medium / Cure Level: Single High / Ink Limit: 300%	Default ink limit for solid vinyl is 250%; an increase to 300% will enhance saturation
EFI Vutek QS2000			
Gandinnovations Jeti 3124 UV		Trailing lamps: 30% / Head lamps: 50%	
Gandinnovations Jeti 3324 UV			
HP DesignJet 35500 UV		3M Piezo Series 5400 UV inks. Tested at 1200x600, 1200x600 @ 15% ink and 600x600 +15% ink (+15% compensates for the loss of contrast from the holes).	
HP Scitex FB500			
HP Scitex FB700			
HP Scitex FB6100			
HP 9000 UV			Requires white PET liner or Do-ALLiner so media sensor can read film
Raster RP-720 UV	Standard paper setting		
Zund UVjet 215-Plus		2-pass, 300% mode for good color saturation	

Solvent, Eco-solvent and Mild Solvent

Compatible with most CLEAR FOCUS films (except JetVue and ImageJetVue) regardless of liner unless noted otherwise.

Mfg & Model (RIP used if applic./known)	Suggested Profile	Settings, Inks, Etc.	Notes
Colorspan DisplayMaker 72sr	13-oz. Scrim	Vacuum: 3.35 H20 / Resolution: 600 dpi Vacuum Fans: 7.5 Post-heater: set between 130°-140°F	Turn off heaters on pre-heat and platen to prevent overheating, which can cause headstrikes.
Epson GS6000	Avery 3000 Perforated Window Film		Tested with ImageVue & EconoVue 70/30
Gandinnovations Jeti 3324 (GandiSoft)	Blue White	12 pass, unidirectional, 230 sqft/hr. K-210, C-210, M-200, Y-215, LC-210, LM-205 / Tension 60/80 Heat:125°F/175°F / Curing lamps: Trailing: 30%; Head: 50%	
EFI Vutek UltraVu 3300 & 3360		Ultra/standard mode recommended to prevent headstrikes	
EFI Vutek UltraVu 2360 SC		Ultra mode, standard speed. 360 dpi. Platen: 94°F; Post-temp: 144°F. Inks used: 3M 1592 V2 Piezo inkjet 1500 V2 Solvent	
HP 9000S	HP Premium Self-Adhesive	Platen & Preheat: 30-32°C for ClassicVue film / 34-35°C for ImageVue film / Post-heater: 45-50°C	High Resolution mode is recommended
HP Scitex XLjet 1500*		Ultra mode, standard speed, 360 dpi Platen: 94°F / Post: 144°F	
Mimaki JV-3 130 SPII	Tyvek or 3M IJ 180	300 dpi, 16-pass, 720x720	
Mimaki JV-3 160 SP		720x720, Preheat & Print heat: 38-40°C Stochastic, Bi-directional	See profile on website
Mimaki JV-33 (Raster Link Pro)			See profile on website
Mutoh ValueJet 64 (Scanvec Amiable)		Preheat: 35°C / Platen: 38°C / Dry: 50°C	See profile on website
Roland SP540V VersaCAMM	VTVR View-Thru Vinyl (ESM)	Print Quality: High Printer & Dryer: 44°C	
Roland SolJet Pro II EX SC540**	Glossy Calendered Vinyl	720 dpi	See profile on website
Roland SolJet Pro II 540 EX (Wasatch)			See profile on website
Roland SolJet Pro III SC540 (Versaworks)	PCV2 - Premium Cast Vinyl (ESM)	Print Quality: Standard	
Roland SolJet Pro III XJ-640 (Versaworks 3.0.3)	MCVP - Matte Calendered Vinyl (ESM), v1		
Roland SolJet Pro III XJ-740 (Onyx)	MacTac 5928 (CMYKcmIPC)	720 dpi	
Seiko ColorPainter 64S	Avery 1005 EZ	8-pass, Hi-density, 720x720, Unidirectional, FMXpress / Heaters: F: 45°C / P: 40°C/ R: 45°C	
Seiko ColorPainter H Series		H104 in particular: its takeup system may work better with solid paper liner; testing recommended	

* Has Mesh mode or other means of catching ink overspray; is compatible with DuoVue perforated double-sided banner film

**Additional information is available; please call or email for details

Latex

For HP L25500, L26500 and L28500 Latex printers, the unperforated solid paper liner or Do-ALLiner is recommended.

Mfg & Model (RIP used if applic./known)	Suggested Profile	Suggested Drying & Curing Temps, Etc.	Notes
HP L25500 (Onyx)	HP One-view Adhesive Window Vinyl		
HP L26500*	HP One-view Adhesive Window Vinyl	EconoVue 60/40 with solid liner: Dry: 131° F / Cure: 212° F Heat airflow: 30% ClassicVue with solid liner: Dry: 122° F / Cure: 199° F Heat airflow: 45%	For EconoVue 60/40, can also use HP Permanent Gloss Adhesive Vinyl profile
HP L28500*	HP One-view Adhesive Window Vinyl	Dry: 122° F / Cure: 194° F Heat airflow: 45%	When used with EconoVue 70/30
Mimaki LX400	Standard profile for calendered vinyl		

*Additional information is available; please call or email for details.

▪ HP's media finder can be found at: https://ssl.www8.hp.com/us/en/campaigns/2013/ga/MediaLocator/home.html

Digital Screen & Litho Press

Mfg & Model (RIP used if applic./known)	Suggested Profile	Suggested Settings	Notes
Durst 900 (Caldera)			
HP Indigo 7600 sheetfed			
KBA 200	Styrene - Calendered Adhesive Vinyl		
KBA 205	Styrene - Calendered Adhesive Vinyl		

Offset

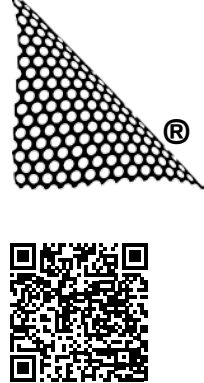| Mfg & Model	Suggested Profile	Suggested Settings	Notes
Heidelberg MO (sheetfed)			Films tested: ImageVue and EconoVue with solid paper liner
Heidelberg XL UV 41" Press (sheetfed)			Film printed: ImageVue 65/35 with clear PET liner

Aqueous Inkjet
Requires CLEAR FOCUS JetVue or ImageJetVue topcoated film

Mfg & Model (RIP used, if applic.)	Suggested Profile	Suggested Settings	Notes
Canon iPF 8300	Vinyl Matte		Vinyl Matte may provide brighter colors; testing recommended
Canon iPF 8400	Extra Heavyweight media	Normal	
Encad NovaJet 500, 700, 750, 850	Standard		Allow inks sufficient time to dry
Epson 9900/9700	*On printer side:* Luster 260 paper	*On driver side:* Photo Black; Velvet Fine Art paper; Color Density -5; No Color Adjustment	
Epson 9600	Premium Photo Glossy Paper	Standard settings using printer driver: Fine 720 dpi, High Speed, Photo-realistic, Density +0%	
Epson 1000			
HP Z6100, Z6200			May perform better with unperforated solid paper liner (custom order) due to position of media sensor
HP 2000, 2500, 3000, 3500, 5000	Heavy Coated Paper, HP Best Mode or Best Photographic Mode		See profiles on website for HP CP UV, HP 5000UV & HP5000 dye
HP 5500 ps UV	Non-HP Vinyl		
Mimaki JV2-130, JV2-160, JV2-180, JV-900, JV-1300			

12/1/2014

PromoLam®

Product description:	PromoLam is a 2.5-mil optically clear cast vinyl film with a permanent pressure-sensitive adhesive. The clear gloss film is designed to protect and prolong the life of the printed image as well as add extra shine. Lighter weight than CurvaLam® overlaminating film, PromoLam offers excellent conformability. PromoLam has a durability rating of up to 2 years for external applications and 5 years for internal applications.
Areas of use:	• Protective clear gloss film for CLEAR FOCUS One Way Vision™ window graphics films and other graphics films. • Glass or transparent surfaces that are flat or have simple curves.
Standard roll size:	54 in x 100 ft (1.37 x 30.48 m)

CLEAR FOCUS PromoLam® — Optically Clear Gloss Cast PVC Overlaminating Film

Technical Data and Typical Characteristics

Product Code: CFPL

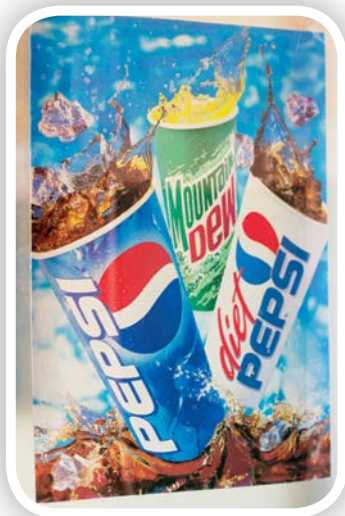| PROPERTY	TEST METHODS	TYPICAL VALUE
Surface Finish	Gloss Meter 60° Reflection	80–90%
Film Thickness (including adhesive)	Micrometer, Federal Bench Type	Approx. 2.5 mils (63.5 microns/0.0025 in)
Release Liner Thickness		Approx. 1.5 mils (38.1 microns/0.0015 in)
Tensile Strength	Tensile Tester with 2-in (51 mm) jaw separation; crosshead speed of 12 in/min.(5.1 mm/s)	≥6.5 lb/in (≥ 1.2 kg/cm)
Elongation	Instron Tensile Tester as above	≥200%
Shelf Life	2 years from ship date when stored at 70° F (21° C) and 50% relative humidity.	
Application Temperature Range	On clean, dry substrate (flat)	40° F to 100° F (4.4° C to 38° C)
Service Temperature Range	On clean, dry substrate	0° F to 140° F (-17° C to 60° C)
Humidity Resistance	Film applied to etched aluminum panels 24 hours prior to testing. 100% relative humidity. 100° F (38° C) for 500 hours	No appreciable effect
Gasoline Resistance	Film applied to etched aluminum panels 24 hours prior to testing. Immersed 30 minutes at 70° F (21° C), stabilized 24 hours before inspection	No appreciable effect

Subject to change without notice

PVSee™

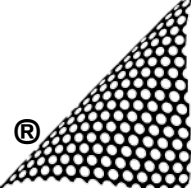|	
Film:	3.5-mil gloss clear calendered PVC on a 3-in. core
Standard roll size:	54 in. x 100 & 1000 ft.
Application:	Point-of-purchase, retail, trade show, decorative, architectural and other window graphics applications

Product code: CFPVSSL

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CLEAR FOCUS Imaging, Inc.

CLEAR FOCUS PVSee™ FILM   Flexible Vinyl

Interior/Exterior Adhesive Mount Product Data   Product Code: CFPVSSL

3.5-mil gloss clear vinyl with clear solvent removable pressure-sensitive adhesive and a 90# smooth paper liner for excellent wet-out clarity.

Note: PVSee is an unperforated window graphics film.

Applications	Windows, glass doors, light boxes and other transparent or backlit surfaces. Ideally suited for point of purchase, retail, trade show and decorative applications.
Composition	Gloss clear calendered PVC with clear pressure-sensitive adhesive
Vinyl Thickness (including adhesive)	4 mils (101 microns/0.004 in)
Release Liner	90# ultra-smooth paper for optimum wet-out clarity
Standard Widths/Lengths	54 in. x 100 & 1000 ft. (1.37 x 30.48 & 304.8 m) Custom sizes available.
Color and Finish	Clear Gloss
Printing	Standard vinyl inks recommended. Print on clear film, not on liner. Compatible with screen printing; inkjet printing using solvent, eco-solvent and mild solvent inks (for denser colors use 2 passes); UV-cure; thermal transfer; and airbrushing. Reverse-print image for interior-mount applications. **Note: Any text will display in reverse on one side.**
Installation	Apply to clean surface. Use plain soap and water, rinse well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners prior to application. Wet application is recommended. Lightly spray the mounting surface with water or a suitable application fluid, remove liner, position the poster as desired, and use a squeegee to remove water/fluid. Use a soft-edged squeegee designed specifically for wet application to protect the graphic from scratches. For detailed instructions, please refer to the PVSee installation instruction sheet.

Typical Characteristics

	15 min.	24 hr.
Target Adhesion Values (PSTC-1, 180° peel @ 12"/min., 73° F, on stainless steel)	30 oz.	40 oz.
Minimum Application Temperature	50° F (10° C)	
Service Temperature Range	-40° F to +180° F (-40° C to +82° C)	
Shelf Life @ 73° F, 50% RH	2 years	
Outdoor Durability	3 years	

Chemical Resistance

Distilled Water (24 hr.)	No Effect
Detergent (24 hr.)	No Effect
10% HCl (10 min.)	No Effect
10% Ammonium Hydroxide (10 min.)	No Effect
Anti-Freeze (24 hr.)	No Effect
SAE 20 Motor Oil (24 hr.)	No Effect
Gasoline (1 hr.)	No Effect
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Subject to change without notice

CLEAR FOCUS PVSee™ Installation Instructions

Recommended tools:
- Soft-edged squeegee designed for wet application
- Isopropyl alcohol (optional)
- Water or suitable application solution in a spray bottle
- Clean cloth and lint-free towels
- Masking tape for creating 'hinges' (for larger graphics)
- Utility knife to trim graphic, if needed
- Pin

PVSee is designed for wet application using water or an application fluid (e.g., a solution of water containing 2% mild liquid soap in a spray bottle). Wet application allows the graphic to be repositioned during installation and helps to prevent air bubbles from getting trapped between the film and the mounting surface.

Temperature of glass must be moderate — between approx. 40° F (5° C) and 85° F (30° C).

Preparation of Installation Surface

1. Wash the glass or other installation surface with mild soap and water. Rinse well with water. Do not use ammonia, Windex® or other solvent-based glass cleaner to clean the surface.
2. Moisten a clean cloth with isopropyl alcohol and wipe the surface to remove any residue. Dry with a lint-free paper towel.

Graphic Installation

1. If the graphic is large, cut some strips of masking tape and have ready to attach to the top of the graphic to create a hinge.

2. Lightly spray the installation surface with water or application fluid.
Note: In the case of graphics that are wider than about 18 inches, it may be difficult to move trapped air bubbles in the center of the graphics to the edges using a squeegee. For easier application, it may help to spray the adhesive side of the film in addition to the mounting surface.

3. Remove the liner from the graphic and position the graphic in place, using the tape hinges if needed to secure it.

4. Working from the center outward to the edges, squeegee the graphic using short, overlapping strokes to remove any trapped air, water or application fluid.

5. Wipe away any remaining water or fluid and examine the graphic for any bubbles under the surface. If there are bubbles, use a pin to gently prick the bubble and press the area with your finger to release the trapped air, water or application fluid.

6. Remove the tape hinges.

It can take several days for any water to fully evaporate and the graphic to achieve clarity.

Questions? Call or email us with any product questions or for technical support.

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3/2014

ReflectVue®

|	
Perforation pattern:	Approx. 70/30 (30% open)
Perforation size:	Approx. 0.060 in. (1.5 mm)
Film:	5.5-mil retro-reflective film on a 3-in. core
Standard roll sizes:	48 in. x 25 & 100 ft.
Application:	POP, retail and commercial window signage where visibility of printed graphic is desired under both daylight and retro-reflected light at night
Product code:	CFRVSL

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B.C.I. IMAGING

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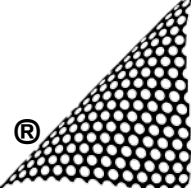
Exterior Mount Product Specifications   Product Code: CFRVSL

5.5-mil silver-gray/black retro-reflective multilayered PET film with clear removable pressure-sensitive adhesive and an unperforated solid paper release liner.

Applications	Windows, glass doors and other transparent surfaces where visibility of printed graphic is desired under both daylight and retro-reflected light at night.
Composition	Silver-gray/black retro-reflective multilayered PET film with a clear removable pressure-sensitive adhesive and an unperforated solid paper liner.
Coefficient of Retro-reflection	45 (measured at -4° entrance angle and 0.2° observation angle)
Open Area	30%, approx.
Film Thickness (incl. adhesive)	5.5 mils (.0055 in./140 microns), approx.
Release Liner Thickness	6 mils (.006 in./152 microns), approx.
Adhesive Thickness	0.8 mils (.0008 in./22 microns), approx.
Perforation Diameter	.060 in. (1.5 mm), approx.
Standard Widths/Lengths	48 in. x 25 & 100 ft. (1.22 m x 7.62 & 30.48 m) Custom sizes available by special order.
Dimensional Stability	Fair
Minimum Application Temperature	50° F (10° C)
Service Temperature Range	10° F to 125° F (-12° C to 52° C)
Expected Lifetime Exterior	1 year under flat, vertical exposure. Adhesion may increase with time. Testing recommended before production.
Water Resistance	Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water. (Lamination may reduce reflectance.)
Humidity Resistance	Fair
Solvent Resistance	Fair
Storage Stability	1-year shelf life when stored at 72° F (21° C) and 50 to 55% relative humidity.
Colors Available	Silver-gray on print side and black on adhesive side.
Printing	Use standard solvent, eco-solvent or latex inks. Print on the silver-gray side, not on the release liner. Not compatible with UV-cure inks. (To prevent ink abrasion, a liquid clear coat or optically clear overlaminate can be used, if needed.)
Installation	Apply to clean, dry glass surface. Prior to application, clean glass with mild soap and water, rinse and dry well. Do NOT use ammonia, Windex® or other solvent-based glass cleaners as they may adversely affect the film's adhesive.
Removal	Remove by peeling from surface. Remove adhesive residue on older installations, if necessary. Due to its material composition, ReflectVue may require more time and effort to remove than other CLEAR FOCUS perforated films. For easier removal, use a solvent-based glass cleaner (e.g., Windex®), an industrial adhesive remover (e.g., Rapid Remover™, produced by RapidTac, Inc.), or a heat source (e.g., heat gun), carefully following the product manufacturer's instructions.

Subject to change without notice

CLEAR FOCUS® SunSecure® Film
Interior-mount Product Specifications

Flexible Vinyl

Product Code: CFSSIVCL

Composite white/black flexible 8-mil vinyl film with removable clear acrylic pressure-sensitive adhesive applied to white side and a solid release liner composed of perforated paper laminated to clear PET film.

Applications:	Interior mounting on windows, glass doors and other transparent surfaces. Designed for commercial and residential security, privacy, and heat- and light-control applications. Not designed for printing.
Composition:	White/black composite PVC with clear pressure-sensitive adhesive and a solid release liner composed of perforated paper laminated to clear PET film.
Open Area:	Approximately 35%
Vinyl Thickness:	.008" (.2 mm)
Release Liner Thickness:	.007" (.17 mm)
Adhesive Thickness:	.001" (.02 mm)
Perforation Size:	.060" (1.5 mm)
Dimensional Stability:	Good
Minimum Application Temperature:	40° F (4° C)
Service Temperature Range:	0° F to 140° F (-17° C to 60° C)
Solar Heat Gain Coefficient:	0.40 (tested on 3/16" clear single glazed glass)
Percent Reduction of Heat Transfer:	52%
Visible Light Transmittance:	0.274
Solar Transmittance:	0.251
Ultraviolet Blockage:	0.917
Expected Lifetime:	Two to three years. Six months for clean removal. Adhesion may increase with time.
Water Resistance:	Very good.
Humidity Resistance:	Fair
Solvent Resistance:	Good
Storage Stability:	One-year shelf life when stored at 70° F (21° C) and 50% relative humidity
Color:	White on adhesive side and black on see-through side.
Application:	Prior to application, clean glass surface with plain soap and water, remove any soap residue with a moist towel, and dry glass well. Do **not** use ammonia or other solvent-based glass cleaners (e.g., Windex®).
Removal:	Remove by peeling from surface. Remove adhesive residue on older installations, if necessary.

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SuperVue®

Perforation pattern:	Approx. 50/50 (50% open)
Perforation size:	0.08 in. (2.0 mm)
Film:	8-mil calendered PVC on a 3-in. core
Standard roll sizes:	54 in. x 25 ft.
	54 & 60 in. x 100 & 1000 ft.
Application:	Building wraps, other large-format window graphics
Product code:	CFEABWSV

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CLEAR FOCUS Imaging, Inc.

CLEAR FOCUS SuperVue® FILM   Flexible Vinyl

Exterior Adhesive Mount Product Specifications   Product Code: CFEABWSV

8-mil white/black composite PVC with clear removable acrylic pressure-sensitive adhesive and a release liner consisting of clear PET film laminated to perforated paper to absorb ink.

Applications	Windows, glass doors and other transparent surfaces
Composition	White/black PVC laminate with clear pressure-sensitive adhesive coating and a release liner consisting of clear PET film laminated to perforated paper to absorb ink.
Open Area	50% (approx.)
Vinyl Thickness (incl. adhesive)	8 mils (.008 in./203 microns), approx.
Release Liner Thickness	7 mils (.007 in./178 microns), approx.
Adhesive Thickness	1 mil (.001 in./25 microns), approx.
Perforation Diameter	.080 in. (2.0 mm)
Standard Widths/Lengths	54 & 60 in. x 100 & 1000 ft. (1.37 & 1.52 x 30.48 & 304.8 m); 54 in. x 25 ft (1.37 x 7.62 m) Custom sizes available by special order.
Dimensional Stability	Good
Minimum Application Temperature	40° F (4° C)
Service Temperature Range	0° F to 140° F (–17° C to 60° C)
Expected Lifetime Exterior	2 to 3 years. 6 months for clean removal. Adhesion may increase with time.
Water Resistance	Fair. Immersion in water not recommended. If exposed to rain, an optically clear, compatible overlaminate can be used to prevent holes from filling with water.
Humidity Resistance	Fair
Solvent Resistance	Good
Storage Stability	1-year shelf life when stored at 70° F (21° C) and 50% relative humidity
Colors Available	White on print side and black on adhesive side.
Printing	Standard vinyl inks recommended. Print image on vinyl side, not on release liner. Compatible with screen printing; inkjet printing using solvent, eco-solvent, mild solvent, latex (with solid paper liner) and UV-cure inks; thermal transfer; electrostatic transfer; and airbrushing.
Application	Apply to clean, dry glass surface. Use mild soap and water, rinse and dry glass well. Do NOT use ammonia, Windex® or other solvent-based glass cleaner prior to application.
Removal	Remove by peeling from surface. Remove any adhesive residue on older installations, if necessary.

Other SuperVue Products

SuperVue with a White PET Liner Code: CFEABWSVWL	Features a patented white PET liner consisting of white PET film laminated to perforated paper to absorb ink and to facilitate sensing of media by printer. Compatible with all printing methods listed above, except latex inks. Custom order.
SuperVue with a Solid Paper Liner Code: CFEABWSVSL	Features an unperforated solid paper liner. Recommended for latex inks. Not compatible with UV-cure printers. Custom order.

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