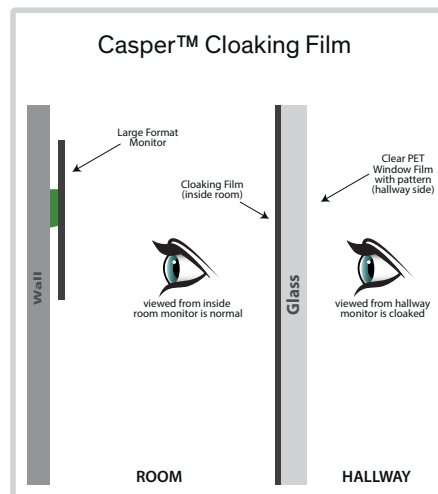


Technical Data Sheet: Casper Cloaking Film

Applications	
Supported	Horizontally mounted LED displays over 40" diag size
Supported after field verification or not currently supported	LED monitors smaller than 40".
Not currently supported	Surface Hubs and collaborative touch screen devices
Not currently supported	OLED displays. Laptops, tablets, and smart phones.
Not supported	Projection displays. Displays mounted behind glass.
Not supported (discontinued technology)	Plasma displays. Passive 3D displays. CRT displays.
Physical specifications	
Roll WxL	56 inches x 100 feet
Film thickness	5 mil
Film chemistry	Triacetate
Adhesive Thickness	1 mil
Adhesion to glass	1.3lbs/ sq in
Adhesive chemistry	Acrylic
Lightfastness	Grade 5
UV Transmission	1%
Infrared Transmission	92%
Solar energy - transmitted	66%
Solar energy - reflected	7%
Solar energy - rejected	29%
Solar energy - absorbed	27%
Visible light - transmitted	41%
Visible light - reflected	6%
Visible light - glare reduction	54%
Flammability	
E84	Class A
Cleaning	
Cleaning	Water-based/Solvent (WS)
Chemical Resistance	
Expo White Board Cleaner	Pass
70% Isopropyl Alcohol	Pass
91% Isopropyl Alcohol	Pass
Fantastik	Pass
409	Pass
Goo Gone Gel	Pass
Goof Off (note does remove Black Sharpie)	Pass
Zep heavy duty citrus Cleaner	Pass
Woolite Oxy	Pass
3M HB Quaternary	Pass
Hydrogen Peroxide	Pass
Virex 256	Pass
Envy	Pass
Bleach 10:1	Pass
Oxivir	Pass
Installation	
Directional pattern	Apply vertically; cannot be railroaded
Small scale install (less the 54.5" width)	Wet application
Full window install (wider than 54.5")	Wet application with seam
Installation surface temp	60°F-90°F
Humidity range	30% - 60%
Chemistry / Compliance	
VOCs	Cal 0135 Pass
Prop 65	Prop 65 compliant

Technical Data Sheet: Casper Graphic Film

Physical specifications	
Roll WxL	60 inches x 100 feet
Film thickness	2 mil
Film chemistry	PET
Adhesive Thickness	1 mil
Adhesion to glass	.5 lbs/ sq in
Adhesive chemistry	Acrylic
Lightfastness	Grade 5
Flammability	
E84	Class A
Cleaning	
Cleaning	Water-based/Solvent (WS)
Chemical Resistance	
Expo White Board Cleaner	Pass
70% Isopropyl Alcohol	Pass
91% Isopropyl Alcohol	Pass
Fantastik	Pass
409	Pass
Goo Gone Gel	Pass
Goof Off (note does remove Black Sharpie)	Pass
Zep heavy duty citrus Cleaner	Pass
Woolite Oxy	Pass
3M HB Quaternary	Pass
Hydrogen Peroxide	Pass
Virex 256	Pass
Envy	Pass
Bleach 10:1	Pass
Oxivir	Pass
Installation	
Directional pattern	Apply horizontally
Installation	Wet application
Installation surface temp	60°F-90°F
Humidity range	30% - 60%
Chemistry / Compliance	
VOCs	Cal 0135 Pass
Prop 65	Prop 65 compliant



Casper® Cloaking Technology Film

Install Guidelines. NOV 8, 2017

Cloaking Technology Film renders wall-mounted and other large LED displays in conference rooms, huddle rooms, and other glass fronted rooms *opaque* when viewed from outside the room. Most large, wall-mounted displays can be cloaked with the exception of: 3D displays, Microsoft Surface Hubs, Barco video walls, OLED displays, plasma screens, direct-view LED video walls, and projection video.

Installation Guidelines:

Casper Cloaking film is installed in a similar way to window films however it does have some differences:

1. **CORRECT ORIENTATION IS ESSENTIAL.** Casper Cloaking must be installed in a vertical orientation for LED displays 40" or larger due to its unique cloaking technology. EXCEPTION! In some cases a horizontal install can cloak smaller monitors or computer monitors! Check orientation before estimating and installing. An Orientation Validation card is now also available
2. For "Vertical installations" The length edge of the film must be installed exactly parallel to the vertical window frame using the vertical window frame as a guide. It is best if the monitor is switched on to verify film orientation
3. Casper Cloaking film must be installed on the side of the glass closest to the display monitor.
4. Clean **thoroughly** the glass surface and spray the surface with mounting solution
5. Cut the Casper Cloaking film to be installed on a hard surface such as glass. Cutting with a film handler may result in jagged edges. Oversize the film and make final trims once installed. Use a new, sharp, blade point for every cut
6. Remove the adhesive side release liner and spray the film liberally with the mounting solution. Place on the wet glass and position the film. Re-wet the surface of the film so the squeegee will easily slide on the film.

Squeegee Procedure

7. **First** - an initial light squeegee to hold the film in position.
8. **Second** - Finish Trim all edges of the film a maximum of 1/16" from the edge of the frame to enable mounting solution removal.
9. **Third**-Rewet the surface of the film and give a **Final One Time HARD PRESSURE Squeegee to fix the film onto the glass.** This must be a Systematic squeegee pattern, overlapping 50% over the previous squeegee line. Position the squeegee at a 45% angle, pushing the mounting solution away from the area just squeegeed and remove all of the mounting solution. **DO NOT SQUEEGEE AGAIN** except for bumping out the edges with a moisture absorbing soft towel Recommended a BLUE MAX squeegee or similar.

10. Bump out all edges with a paper towel over the squeegee to completely remove any remaining water. Make sure all the edges are clean and there is no remaining mounting solution
11. Because this film is unlike a window film some fingering may appear shortly after installation. Should this occur then continue to press out the finger with a single push with a hard squeegee with soft paper towel over the blade towards the edge of the film until all moisture is removed from the edge. Make sure that there are no tiny particles under the film along all edges as this would create a weak spot allowing for fingering.
12. Continue to monitor the installed film for any signs of curling or fingering and immediately press these out
13. **MOUNTING SOLUTION:** Install Casper Cloaking film with clean water and Joy/Ajax or similar as a mounting solution. Film-On is not recommended
14. When trimming excess film be careful not to pinch or fold the film back tightly as this may damage the film. **IMPORTANT:** Trim all edges using a metal trim guide and a new blade point. This will help reduce any rough trimming edges or rough hand cuts. This film is difficult to hand trim no matter how good a trimmer you may be! Use a trimming guide!
15. Casper Cloaking film has a Permanent Pressure Sensitive adhesive system.
16. **SEAMS:** A 1/16" parallel gap is recommended when seaming films.

Precautions:

1. Test a small sample of the film prior to installation (recommend at the time of quoting/estimating) to make sure the film is appropriate and works for the particular monitor that is needing cloaking.
2. Be careful not to bend at sharp angles or kink the film when handling or installing –be extra careful when trimming in corners.
3. Smudges can appear in the adhesive if the film is hard squeegeed after the adhesive has begun to set up. If this does occur the film can be carefully peeled back off the glass, resprayed and re-squeegeed.

Note!

- **WATCH AND WORK THE FILM AFTER INSTALLATION.** Continue to monitor the installed film for any signs of curling or fingering and immediately press these out. This means that the installation may take a bit longer than a normal window film installation.
- California roll type installation is not recommended
- It is recommended that the film be cut slightly oversized and then trimmed to size after fitting to the glass. Thereafter make the final trim cuts and edge bumping.



Casper™ Cloaking Technology

BY DESIGNTEX

FILM CLEANING INSTRUCTIONS

The following are washing and maintenance instructions for all your **Casper™** Cloaking and Architectural Graphic Layer Films. Post these instructions where employees and/or maintenance personnel can read them since failure to follow them will irrevocably void your warranty.

DO NOT CLEAN UNTIL THIRTY (30) DAYS AFTER THE INSTALLATION DATE. This will ensure proper care of the adhesive and edge seal used to bond the film to the glass surface.

Recommended cleaner is *SimGlas®* Window Film Cleaner and microfiber cloth.

<https://www.decorativefilm.com/accessories-simglas-cleaner>

DO NOT USE BRISTLE BRUSHES OR ANY OTHER MATERIAL THAT MIGHT SCRATCH THE SURFACE. CAUTION! DO NOT USE AMMONIA OR VINEGAR OR ANY PRODUCTS CONTAINING AMMONIA OR VINEGAR TO CLEAN THE FILM. Some paper towels are coarse enough to scratch the Film. Repeated use of improper cleaning implements and/or solutions will damage the appearance of the Film.

GENERAL GUIDELINES

DO NOT USE ANY ADHESIVE TAPES, LABELS, OR SIGNAGE ON THE SURFACES TO WHICH THE FILM HAS BEEN APPLIED.

Under normal conditions, film will dry within 30 days.

Normal viewing conditions: View treated windows from a distance of six feet at angles of up to 45 degrees. Since a particle-free application is possible only under sterile conditions, there may be small amounts of dust or grit caught between the film and glass.

For help on specific questions relating to a Casper Film Product, contact our Technical Service team:



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SOLYX® *SimGlas®*



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DESIGNTEX

Casper® Cloaking Technology Film

Install Guidelines. Jan 12, 2018

Cloaking Technology Film renders wall-mounted and other large LED displays in conference rooms, huddle rooms, and other glass fronted rooms opaque when viewed from outside the room. Most large, wall-mounted displays can be cloaked, with the exception of 3D displays, Microsoft Surface Hubs, Barco video walls, OLED displays, plasma screens, direct-view LED video walls, and projection video.

READ THIS ENTIRE DOCUMENT PRIOR TO BEGINNING ANY INSTALL!

Installation Guidelines

Casper Cloaking film is installed in a similar way to window films, however it does have some differences.

1. **CORRECT ORIENTATION IS ESSENTIAL.** Casper Cloaking must be installed in a vertical orientation for LED displays 40" or larger due to its unique cloaking technology. EXCEPTION: In some cases a horizontal install can cloak smaller monitors or computer monitors. Check orientation before estimating and installing. An orientation validation card is available.
2. For vertical installations, the length edge of the film must be installed exactly parallel to the vertical window frame using the vertical window frame as a guide. It is best if the monitor is turned ON to verify film orientation.
3. Casper Cloaking film must be installed on the side of the glass closest to the display monitor.
4. Clean the glass surface thoroughly and spray with mounting solution. Ensure glass is sufficiently wet.
5. Cut the Casper Cloaking film to the desired size on a hard surface, such as glass. Cutting with a film handler may result in jagged edges. Oversize the film (allow excess) and make final trims once installed. Use a new, sharp, blade point for every cut.
6. Remove the adhesive side release liner and spray the film with the mounting solution. Place on the wet glass and position the film. Re-wet the surface of the film with just enough solution so the squeegee will slide on the film.
7. **SQUEEGEE METHOD:** A one time, HARD PRESSURE pass with the squeegee to fix the film onto the glass. This must be a systematic squeegee pattern, overlapping 50% over the previous squeegee line. Position the squeegee at a 45-degree angle, pushing the mounting solution away from the area just squeegeed and remove all of the mounting solution. DO NOT SQUEEGEE AGAIN except for bumping out the edges with a moisture-absorbing soft towel. A "BLUE MAX" squeegee or similar is recommended.
Finish trimming all edges of the film with a 1/16" from the edge of the frame to enable any mounting solution removal from the edges.
8. Bump out all edges with a paper towel covering the squeegee to completely remove any remaining water. Make sure all the edges are clean and dry so that there is no remaining mounting solution. Because this film is unlike typical window films, some "fingering" may appear shortly after installation. Should this occur, press out the "finger" with a single push of a hard squeegee, with soft paper towel covering the blade. Push the squeegee toward the edge of the film until all moisture is removed from the edge. Make sure that there are no tiny particles under the film along every edge as this can create a weak spot and increase chances of additional "fingering."

Continue to monitor the installed film for any signs of curling or “fingering” and press these out as instructed.

9. **MOUNTING SOLUTION:** Install Casper Cloaking film with clean water and Joy/Ajax or similar liquid dish soap as a mounting solution. A one second squeeze for a 32oz spray bottle filled with clean water. NOTE: Film-On, Rapid Tack and other enhancers are not recommended.
10. **TRIMMING** It is important to trim all edges using a metal trim guide and a new blade point for every cut. This will help reduce any roughly trimmed edges or rough hand cuts. This film is difficult to hand trim no matter how good a trimmer you may be! Use a trimming guide!
11. **SEAMS:** A 1/16” parallel gap is recommended when seaming films.

Precautions:

1. Test a small sample of the film prior to installation (recommend at the time of quoting/estimating) to make sure the film is appropriate and works for the particular monitor that is needing cloaking.
2. Be careful not to bend at sharp angles or kink the film when handling or installing. Be especially careful when trimming in corners.
3. Smudges can appear in the adhesive if the film is hard squeegeed after the adhesive has begun to set up. If this does occur, the film can be carefully peeled back off the glass, resprayed and re-squeegeed.

Please Note:

- This film no longer has the surface release liner which previously had to be removed!
- **MONITOR FILM AFTER INSTALLATION.** Continue to monitor the installed film for any signs of curling or fingering and press these out. This means that the installation may take a bit longer than a normal window film installation.
- California roll type installation is not recommended.
- It is recommended that the film be cut oversized and then trimmed to size after fitting to the glass. Thereafter make the final trim cuts and edge bumping.
- Do not use rubber window cleaning squeegees or graphic vinyl install card squeegees! eg. 3M gold card

MOST IMPORTANT: Typically window film installers wet the glass to hold the film on the glass in order to remove the release liner, spray the adhesive and flip the film. **THIS METHOD IS NOT RECOMMENDED** as Casper Cloaking film immediately begins to absorb moisture. We suggest either a two man method where one person holds the film while the other removes the liner and sprays the adhesive, or, the film can be laid on a clean flat dry surface and the liner can then be removed while spraying the adhesive surface. **All stages of the install should be done in a way to keep either side of the film from being wet for a minimal amount of time. “Curling off the glass is typically caused by Casper absorbing moisture”**

Casper™ By DESIGNTEX

WINDOW FILM CLEANING INSTRUCTIONS

The following are washing and maintenance instructions for all your **Casper™** Cloaking and Architectural Glass Finish Films. Post these instructions where employees and/or maintenance personnel can read them since failure to follow them will irrevocably void your warranty.

DO NOT CLEAN UNTIL THIRTY (30) DAYS AFTER THE INSTALLATION DATE. This will ensure proper care of the adhesive and edge seal used to bond the film to the glass surface.

Recommended cleaner is *SimGlas®* Window Film Cleaner and microfiber cloth.

DO NOT USE BRISTLE BRUSHES OR ANY OTHER MATERIAL THAT MIGHT SCRATCH THE SURFACE. CAUTION! DO NOT USE AMMONIA OR VINEGAR OR ANY PRODUCTS CONTAINING AMMONIA OR VINEGAR TO CLEAN THE FILM. Some paper towels are coarse enough to scratch the Film. Repeated use of improper cleaning implements and/or solutions will damage the appearance of the Film.

GENERAL GUIDELINES

DO NOT USE ANY ADHESIVE TAPES, LABELS, OR SIGNAGE ON THE SURFACES TO WHICH THE FILM HAS BEEN APPLIED.

Under reasonable weather conditions, film will dry flat, with no blisters, within 30 days, when viewed under normal viewing conditions. Normal viewing conditions are viewing treated windows from a distance of ten feet from the room side, at angles of up to 45 degrees, looking at a clear or uniformly overcast sky. Since a particle-free application is possible only under sterile conditions, there may be small amounts of dust or grit caught between the film and glass.

Please be advised that there may be a small amount of water left behind, particularly with the thicker films. Please be patient. Within approximately 60-90 days, this water will bake out. However, in the event that you see larger blisters forming within 24 hours after the installation, please call your installation company immediately.

For help on specific questions relating to a Casper Film Product, contact our Technical Service team:



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