

contra*vision*[®] *Perforated Window Films*

Printing Contra Vision[®] clear perforated window films featuring a Universal Liner with UV inkjet printers to produce inside application see-through graphics.

In summary:

1. It's easy to do, if you have a printer with white ink
2. You must minimize the amount of ink used, and don't over-cure
3. Test print –and fully evaluate the test print
4. Only use Contra Vision[®] clear perforated window featuring a Universal Liner films when printing with UV inkjet printers

Producing effective see-through graphics for inside application involves printing Contra Vision[®] clear perforated material with the required design (reverse-reading) and 'flood-coating' further layers of ink, white and black, so that the design can be seen (right-reading) from one side and the applied panel seen through from the other side. Achieving a reliable result depends upon using ink in appropriate levels to achieve the desired function, without overloading the print so causing hole blockages and other potential issues.

Design

Use the minimal ink loading required to define the image and avoid producing over-saturated results. In use, a percentage of the image will be missing because of the perforated material's structure. Attempting to compensate for apparent loss of contrast may result in an image that requires more ink than the material can handle and may contribute to the potential for blocked holes and adhesive failure. Contrast is restored in application conditions because of the balance of light favoring the design side and reflecting more light back than is visible through the holes.

White Layer

The white printed layer is provided to back up the design layers and render them visible from the design side of the panel. Total opacity in this layer is not a requirement, it must though be sufficient to block to an acceptable extent, the subsequently applied black layer from showing through it. Test print to find the lower of the acceptable ink limits (invariably less than 100%) and assess the result in exterior lighting conditions with dark subject matter behind the print and visible through its perforations. Results will be deceptive if the test print is viewed in lighting conditions that do not reflect those the print will encounter in daylight.

Black Layer

The black layer is provided so as to absorb light and present a clear view through the applied graphic. In practice, this can be accomplished with a very light weight of pure K black printed as a flood coat. Again, aim for the minimum level of ink that accomplishes the desired result. A fully saturated flood coat is no more effective in functional terms than a lighter coat and the additional ink it uses may contribute to the potential for hole blocking.

The print should be evaluated in conditions typical of those it will meet in use. Evaluate the design side of the print in daylight conditions with something darker behind the print. Evaluate the other side of the print by viewing from within an interior space to daylight beyond. From the print side, an acceptably colored image should be seen with clean highlight and no detail in fully saturated shadow. From the other side, no print detail should be seen other than a faint ghosting caused by the accumulation of ink on the edges of hole.

Test printing must be undertaken to ensure that amount of ink used and/or the amount of curing does not block the holes in the perforated window film, and/or reduce the strength of the adhesive – a test application onto a window is essential.

Please leave the print to fully cure before removing the liner.

It is not possible for us to test all combinations of artwork, RIP settings, press model, press settings, age of the lamps, and ink types. In general we recommend that the curing 'dose' and the volume of ink is minimized (as above), while still giving a good result; for example many printing presses use stronger curing to give a gloss finish, typically not visually desirable for inside-application see-through graphics. We further recommend that prints are nested on the material to avoid, if possible, the lamps sitting over and heating up the edge of the material when changing print direction which may cause curling of the edge of the material.

For further information visit www.contravision.com

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