

## Performance™ White on Black WBAG40HDB

**Performance™ HD WBAG40HDB** is a White/ Black perforated self-adhesive vinyl with 40% transparency; and a removable, pressure-sensitive adhesive, featuring a Universal Liner with Grayliner™ technology. This film allows an image to be seen on the outside of a window while allowing viewing through from the inside. This film features a part-perforated paper liner and is intended for UV-cure, solvent, 'eco-solvent' and latex inkjet printing, and screen-printing.

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Face Film           | Warm White on Black laminated polymeric calendered PVC                                                                                                     |
| Adhesive            | Transparent, removable, solvent polyacrylate                                                                                                               |
| Adhesive Weight     | 35g/m <sup>2</sup> ±3g/m <sup>2</sup>                                                                                                                      |
| Liner               | Part-perforated Universal Liner. Perforated silicone coated paper laminated with grey-printed paper backprinted with Contra Vision® Performance™ branding. |
| Liner Weight        | 152g/m <sup>2</sup> ±5g/m <sup>2</sup>                                                                                                                     |
| Removability        | Minimum 12 months clean removability without adhesive residue at ambient temperature<br>Performance may be affected in Zone 2 & 3 regions                  |
| Shrinkage           | x direction ≤0.6%, y direction ≤0.6% FTM14                                                                                                                 |
| Service Temperature | -25°C to 65°C                                                                                                                                              |
| Shelf Life          | 2 years under normal conditions at a temperature of 22°C and relative humidity of 50-55%                                                                   |

### Print Types

☒ Solvent
 ☒ Eco-Solvent
 ☒ Latex or Resin
 ☒ UV
 ☒ Screenprinting

### Application Recommendations

- Apply the film using a [dry application method](#).
- Clean surfaces thoroughly to clear from dust, grease or any contamination; final clean with soap and water, rinse, and dry.
- **Not to be applied** to fresh paint, ink, polycarbonate, rubber, plastic moldings, and certain PVCs—in case of doubt, test prior to final application.
- Recommended for flat or gently curved surfaces only.
- Cut film back at least 3mm from any edges so the film finishes on a flat surface.
- Film **must not touch** rubber window moldings.
- Trim side-by-side panels to form a butt seam—**do not overlap**.
- Follow minimum application temperature and avoid washing within 24 hours of application.

### Printing Recommendations

Universal Liner construction, correctly printed, eliminates the “bridging” over the perforated holes that can occur with UV curing inkjet printers and Replacement Liner construction. After printing the ink must be thoroughly dry, including in the perforated holes to avoid any contamination, particularly during lamination.

Certified for  
HP Latex Inks

Search our database for all Contra Vision profiles  
<https://www.contravision.com/print-substrates/print-profiles-register/>

This document is intended as a source of information, is given without guarantee, and does not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of the product for their specific intended purpose.

150µm  
±10µm

Film Thickness

40%  
ø1mm

Transparency

4°C  
min

Application temp

2 - 5  
years

External durability

on static applications  
See next page for more info

### Peel Adhesion

Printed film on  
glass, typical value

3N/25mm

20 mins

4N/25mm

24 hours

## Performance™ White on Black WBPAG40HDB

### Transit approval

#### Spanish Car and Bus Certification

Spanish Ministerio de Economía,  
Industria y Competitividad, ITC/1192/2010

#### Train and Tram Certification (UK & EU)

EN45545-2 R1 & R7 certification

#### German Car and Bus Certification

KBA accreditation

Further details can be found at <https://www.contravision.com/transit-advertising/transit-certification/> or contact us if approval in a particular country is not listed.

### Fire rating

BS EN 13501. Certificate(s) can be found at <https://www.contravision.com/print-substrates/datasheets/>

### Solar performance

| Based on 3mm glass                 | No film | 40% Transparency |
|------------------------------------|---------|------------------|
| Visible light transmission         | 90%     | 36%              |
| Visible light reflection, exterior | 8%      | 51%              |
| Visible light reflection, interior | 8%      | 11%              |
| UV transmission                    | 40%     | 16%              |
| Solar energy transmission          | 83%     | 33%              |
| Solar energy reflection            | 8%      | 51%              |
| Solar energy absorption (total)    | 9%      | 16%              |
| Glare reduction                    | 0%      | 60%              |
| G value                            | 0.86    | 0.344            |
| Shading coefficient (SC)           | 0.86    | 0.40             |

### Durability

Durability stated is for unprinted and untreated material correctly applied to an inert, vertical, static (nonvehicular) substrate which is subject to Mid-European weathering conditions. Some printing inks and drying or curing regimes may reduce the expected lifetime of the printed graphic. Please consult your ink manufacturer for guidance. Incorrect application methods, inadequate window cleaning and preparation and incompatible window treatments may reduce the expected lifetime of the applied material whether printed or unprinted, overlaminated or unlaminated. Mechanically sustained damage, chemical damage and UV-degradation to printed, unprinted, laminated or unlaminated material may also reduce expected durability. There may be some discolouration with prolonged exposure to sunlight. All perforated window films are especially vulnerable to damage along the edges and corners, which may lead to premature failure.

**Zone 1;** 5 years (outside) (Northern Europe, Italy (North of Rome))

**Zone 2;** 3 years (outside) (Mediterranean area (without North Africa), South Africa, Australia South Region)

**Zone 3;** 2 years (outside) (Gulf Area, Africa, Australia North Region)

For more information on zones and a map of the regions, please visit <https://www.contravision.com/print-substrates/datasheets/>

### Regulations

Some countries and regions have laws or regulations requiring minimum light passage that may limit or preclude the use of this product on vehicle windows. The user is responsible for determining and complying with all applicable standards.

### Environmental

Contra Vision perforated window film is phthalate free and conforms to the latest REACH regulations - please refer to our website for further details. Contra Vision packaging is produced from recycled cardboard, with polypropylene end bungs and polyethylene wrapping. All of which are fully recyclable, subject to local recycling facilities. For further information on the environmental benefits of using Contra Vision products and the efforts we're making to improve the sustainability of our material, you can search for "sustainability" on our website.

### Substrate

This product is not recommended for use on glass with coatings such as anti-reflective, self-cleaning and scratch-resistance, which may be damaged during film removal.

### Other information

For further information visit the Contra Vision Technical Hub at <https://www.contravision.com/print-substrates/technical-hub>