



TECHNICAL DATA SHEET - DIGITAL PRINTING - LAMINATE - PERMANENT ADHESIVE V 650 B

Film composed of a 2.75-mil (0.07-mm) calendered, monomeric PVC, which is coated with a pressure-sensitive acrylic adhesive. Glossy surface finish for cold laminating; mainly for mechanical protection purposes.

FILM FEATURES:

	<u>Indicative values</u>	
Thickness:	2.75 mil 0.07 mm	
	<u>Average values</u>	<u>Standard</u>
Tensile strength:	min. 7.75 lb./in. min. 30 N/25 mm	HEXNFX4102I
Elongation at break:	min. 80 %	HEXNFX4102I
Shrinkage 168 hours at 158 °F (70 °C):	< 0.047 inch < 1.2 mm	HEXRET001

LINER:

- Silicone-coated 58.8# paper with grey HEXIS print.
- Stable under hygrometric variations.

ADHESIVE PROPERTIES:

(Measured average values at publication of the technical data sheet)

	<u>Average values</u>	<u>Standard</u>
Peel strength test 180° on glass:		HEXFTM001
after 20 minutes of application	3.32 lb./in. 15 N/25 mm	
after 24 hours of application	3.98 lb./in. 18 N/25 mm	
Initial tack	4.43 lb./in. 20 N/25 mm	HEXFTM009
Release	0.022 lb./in. 0.1 N/25 mm	HEXFTM003

- Resistance to solvents: the adhesive is resistant to most chemicals (alcohol, diluted acids, oils).

ADHESIVE:

- Solvent-based acrylic adhesive.
- Immediate and permanent adhesion.

USER'S INSTRUCTIONS:

- UV protection.
- Resistance against mechanical stress.
- Using this protective film also enables you to modify the substrate's appearance by providing it with a gloss surface finish.

A film applied to surfaces exposed to frequent mechanical stress will be subject to repeated abrasion that will reduce more or less rapidly its lifespan (change of film's and/or complex's appearance, peeling off, etc.).

- Laminating the V880 or V890 film with the V650 laminate is strictly prohibited.
- Using this product to protect water-based inkjet prints requires an application method with a 2-cm (0.79-in.) extra margin at the edges.
- Depending on the type of surface to be protected: when applied to paintworks or "non dry" inkjet prints, the V650 laminate may show signs of shrinkage. To avoid such alterations or for medium term applications, we strongly recommend the use of our V700 laminate.
- Recommended application temperature: +50 °F to +95 °F (+10 °C to +35 °C).
- Operating temperature range: -22 °F to +140 °F (-30 °C to +60 °C).
- In the case of an already painted substrate, self-adhesive media must only be applied to undamaged original paintwork. If the paintwork is not original and/or damaged, the application and the removal are at the judgement and risk of the installer.

STORAGE:

- Shelf life (before application):

The shelf life of this film is 1 year when stored upright in its original packaging in a dust-free environment at a temperature ranging from +59 °F to +77 °F (+15 °C to +25 °C) with relative humidity of 50 %.

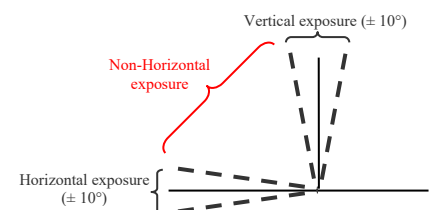
DURABILITY:

- Vertical outdoor exposure:
Without mechanical stress: up to 2* years.

*Time during which the film retains a correct surface finish, from a conventional viewing distance. (A slight and gradual change in color and gloss is natural and is an inevitable and natural phenomenon inherent in the natural breakdown of the materials).

Note: The durability indicated in this document:

- concerns only the laminate and not the finished visual or graphic.
- is inherent to an upright position of $\pm 10^\circ$ and to the product's geographical exposure position. All other positions accentuate the climatic shocks and promote the appearance of an alteration of the gloss or even a slight dusting. Southern exposure, with a 45° inclination can divide the durability of the film by 2, and horizontal exposure by 2.8. Application to the vehicle bonnet is particularly severe, due to the horizontal exposure and the heating provided by the engine.
- is confirmed by UV aging tests and vertical natural weathering.



- Vertical indoor exposure: up to 4 years (for surfaces or areas subject to moderate handling or visitor frequency).

NOTES:

Due to the great variety of substrates and the growing number of new applications, the installer must check the suitability of the medium for each application. The measuring methods for the standards quoted above served as the basis for the development of our own measuring methods which are available on request. Please feel free to contact us to get the latest instructions in use. All the published information is based on measurements regularly performed in the laboratory. It does not however constitute a binding guarantee. The seller cannot be held liable for indirectly related damages and assumes no liability for claims that are higher than the replacement value of the purchased product. All specifications are subject to potential changes without prior notice. Our specifications are automatically updated on our website www.hexis-graphics.com.