



TECHNICAL DATA SHEET - WRAPPING

HX20000 Series

Range of products consisting of a 3.94- to 4.33-mil (0.100- to 0.110-mm) (upon reference), very high performance, multi-layered, cast vinyl, which is coated with a pressure-sensitive, solvent-based, acrylic adhesive. Structured adhesive for faster application and easier air egress. Specially designed for vehicle full wraps and strongly deformed surfaces. Glossy or matt surface finish.

FILM FEATURES:

	<u>Indicative value</u>	
• Thickness (upon reference):	3.94 to 4.33 mil <i>0.100 to 0.110 mm</i>	
	<u>Average values</u>	<u>Standard</u>
• Tensile strength:	min. 3.3 lb./in. <i>min. 15 N/25 mm</i>	HEXNFX41021
• Elongation at break:	min. 90 %	HEXNFX41021
• Shrinkage 168 hours at 158 °F (70 °C):	< 0.016 inch <i>< 0.4 mm</i>	HEXRET001

LINER:

- 98# embossed, silicone-coated PE paper with grey “THE CAST by 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	3.10 lb./in. <i>14 N/25 mm</i>	
after 24 hours of application	3.54 lb./in. <i>16 N/25 mm</i>	
• Initial tack	3.76 lb./in. <i>17 N/25 mm</i>	HEXFTM009
• Release	0.07 lb./in. <i>0.3 N/25 mm</i>	HEXFTM003

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

ADHESIVE:

- Solvent-based acrylic adhesive.
- Structured adhesive for faster application and easier air egress.
- Immediate and permanent adhesion, optimal after 24 hours of contact.
- Dry application.

USER'S INSTRUCTIONS:

- Recommended minimum application temperature: +15 °C (+59 °F). Apply preferably between 20 °C and 25 °C (68 °F to 77 °F).
- Operating temperature range: -40 °C to +90 °C (-40 °F to +194 °F).
- Conformable product, only suitable for rolling devices and rolling vehicles.
- In the case of 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.
- Due to their structure, the glitter and metallized gloss films will slightly mattify when stretched. In order to obtain a uniform appearance and therefore avoid demarcations, it is necessary to heat slightly (+40 °C / +104 °F) and stretch the entire film during application.
- Films with matt surface finish are fragile products, sensitive to scratching and marking, and should be handled with care. If any traces remain after application, they can be attenuated by slightly heating (max. 90 °C / 194 °F) the surface with a heat gun.
- Due to their particular structure, matt films are more subject to dirt than glossy PVC films. This type of film may require more frequent and/or longer cleaning. Cleaning can be difficult for films exposed to a particularly dirty environment (e.g. race cars, rally cars...).

Note: To ensure optimum opacity, the films in the HX20000 range contain a high concentration of pigments. In certain cases, when cleaning the film, colored traces may appear on cleaning cloths. This is explained by the removing of excess pigment from the surface of the film. That operation will not in any way impair the appearance and the durability of the films.

This effect is more obvious if using cleaning products containing solvents.

OPERATING RECOMMENDATIONS:

- Recommendation (whenever possible): Sunlight and prolonged exposure to weathering and pollution may provoke aging of the film⁽¹⁾. A vehicle wrapped with HX20000 film must be protected from the sun and weather (rain, dew...) as often as possible: during the day, park in the shade; at night, park the car in a closed garage (otherwise, cover the vehicle with a loose protective cover).
- The color of the films is monitored by HEXIS to ensure a faithful reproduction of their tints. Nevertheless, should your project require the use of several rolls of the same color reference, HEXIS recommend using a single batch number of this reference.

- For more information on the application method of the HX20000 film, please refer to the Application Guide on the "Professionals" pages, category "Wrap vinyl", on our site www.hexis-graphics.com.

STORAGE:

- Shelf life (before application):

The shelf life of this film is 2 years when stored unopened in its original packaging at a temperature ranging from +15 °C to +25 °C (+59 °F to +77 °F) with relative humidity between 30 % and 70 %.

INDICATIVE DURABILITIES:

- The pigmentation (color) of the PVC affects the stability duration of the dyes. An estimate of such a durability is obtained by accelerated UV ageing tests performed on the CAST HX20000 films and by outdoor weathering.

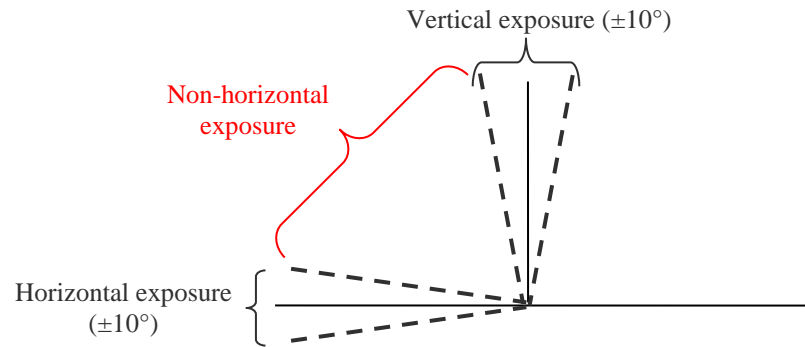
Dominant color		Indicative durability (years)⁽²⁾ Vertical exposure (± 10°)
Range 1:	White, black	6
Range 2:	Colors, other tints	5
	Metallic colors: (HX20877B, HX20990B/M, HX20948B, HX20GGIM, HX20433B, HX20871B, HX20BCMB, HX20MMAB/M, HX20905B/M)	4
	Glitter	2

Chart 1: Vertical durabilities⁽²⁾

- The results indicated below are notably obtained from vertical (± 10°) outdoor exposure. The conditions of durability indicated in Chart 1 are inherent to this position up to a few degrees. Other positions accentuate climatic influences and an alteration in gloss, color or even a slight dusting may appear. Application to the vehicle bonnet is particularly severe, due to the horizontal exposure and the heating provided by the engine.
- To estimate the durabilities for non-vertical exposure, divide the durabilities in Chart 1 by the factors given in Chart 2.

Exposure	Division factor⁽²⁾
Non-vertical exposure	2
Horizontal exposure (±10°)	2.8

Chart 2: Division factors



- The real durability of a product depends on a large number of parameters, including, among others, the quality and the preparation of the substrate, the exposure (environment, climate, exposure angle), the graphics maintenance, and the degree of pollution.

To find the indicative durabilities of the films for the country of exposure, please refer to the "Conversion rules for indicative durabilities according to geographical area" chart available under *Durability*, on the "Professionals" pages on our site www.hexis-graphics.com.

NOTES:

(1) If an important degradation of the film (due to prolonged exposure to sunlight, weathering, polluting agents) appears (discoloration, powdering, tanning...), it must be immediately removed from the vehicle in order to avoid any damage to the underlying paintwork.

(2) The durabilities indicated in this document do not constitute a binding guarantee. They are an estimate of the 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 an unavoidable and natural phenomenon inherent to the natural breakdown of the materials.

Due to the great variety of substrates and the growing number of new applications, the installer must check the suitability of the media for each application.

The measuring methods for the standards quoted above served as 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.