



TECHNICAL DATA SHEET - WRAPPING

HX30000 Series

Range of products consisting of a 70- μ m to 280- μ m (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*. Gloss, matt, super matt or structured surface finish.

*The following products are intended for use on flat or slightly curved surfaces: HX30CHSBRB, HX30CASBRB.

FILM FEATURES:

	<u>Average values</u>	<u>Standard</u>
• Thickness (μ m):		
• Silver carbon effect HX30CASBRB:	240	
• Carbon effect other colours HX30CA000B:	150 to 180 (upon colour)	
• Alligator effect HX30AL000B:	160 to 210 (upon colour)	
• Leather effect HX30PG00B:	210	
• Brushed aluminium effect (HX30BA000B):	130	
• Silver mirror finish (HX30CHSBRB):	70	
• Matt & super matt:	100 to 110 (upon colour)	
• Variochrome:	110	
• Pearly iridescent:	110 to 165 (upon colour)	
• Tensile strength (N/25 mm):	min. 15	HEXNFX41021
• Elongation at break (%):		
• Structured surface effects (carbon, alligator, leather, brushed aluminium...) and HX30CHSBRB:	min. 50	HEXNFX41021
• Other references:	min. 90	
• Dimensional stability (mm): after 168 hours at 70 °C	< 0.5	HEXRET001

LINER:

- Embossed and silicone-coated liner
- Stable under hygrometric variations

ADHESIVE PROPERTIES:

(Average values measured at data sheet editing time)

(N/25 mm)	HX30CA000 (carbon effect)	HX30CASBRB (silver carbon effect)	HX30AL000B (alligator effect)	HX30PG000B (leather effect)	HX30BA000B (brushed aluminium effect)	HX30CHSBRB (silver mirror finish)	Other type (mat. varichrome, pearly iridescent)	Standard
180° peel strength test – after 20 min. of application	11	17	15	16	18	9	20	HEXFTM001
180° peel strength test – after 24 hours of application	13	21	20	20	21	12	22	
Initial tack	18	17	22	19	20	14	21	HEXFTM009
Release	0.20	0.30	0.30	0.30	0.30	0.40	0.30	HEXFTM003

- Solvent resistance: the adhesive is resistant to most chemical agents (alcohol, petrol, diluted acids, oils and fuels).

ADHESIVE:

- Solvent-based acrylic adhesive
- Structured adhesive for faster application and easier air egress
- Immediate and permanent adhesion; best after 24 hours of film application.
- Dry application

USER'S INSTRUCTIONS:

- Minimum application temperature recommended: +18 °C (64 °F). Preferably apply at between +20 °C and +25 °C (+68 °F and +77 °F).
- Operating temperature range: from -40 °C to +90 °C (from -40 °F to +194 °F)
- Conformable product, only suitable for rolling devices and rolling vehicles.
- The conformability of the HX30CASBRB and the HX30CAGBRB is relative. In order to preserve the gloss / chrome appearance, it is important to comply with two instructions during the application of these products:
 - Keep the deformation of the film below 10 %.

- The heating must be carried out with care: never concentrate the airflow on a small surface.
- The HX30000 films with structured surfaces (carbon, alligator, leather...) are fragile products. The heating and re-heating steps following application require particular attention. Indeed, heating phases that are too long or too focused may lead to a start of film's tearing.
- During removal, the structured products tend to tear along the pattern of the structure.
- The carbon effect HX30CA000 film (except HX30CA890B) is fragile and sensitive to scratching or marking. Handle with care.
- Films with matt (or super matt) finishes 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 film surface with a heat gun.
- For certain structured effects (alligator, leather) the repetition of the pattern may cause the sensation of a raster, particularly if the product is applied on large surfaces.
- Because of their particular structure, certain films of this range (structured effects, matt or super matt films) are more subject to dirt than gloss PVC films. This type of film may require more frequent and/or longer cleaning. The cleaning can be difficult for films exposed to a particularly dirty environment (e.g. race cars, rallye cars...).
- The **HX30CHSBRB** (silver mirror) is a technical product that requires particular attention during application:
 - Handle the film on its liner with great care:
 - Do not fold the film as long as it is still in contact with its liner. Any foldings will result in slight marks on the film that cannot be removed later. Once the film is peeled off from the liner, it can be folded without any risk of damage.
 - Do not roll up the film too tightly (e.g. do not roll up without using a core) as this will risk tunnelling between the film and the liner and mark the film irreversibly.
 - The HX30CHSBRB film is more rigid than the other products of the HX30000 range and therefore requires more strength for the same deformation. Wraps on large-size pieces may require two operators and a longer application time than other products of the HX30000 range.
 - Be careful to not exceed the limits of the product: the HX30CHSBRB can undergo a slight and irreversible alteration of its appearance (whitening, loss of gloss...) if the film is stretched / deformed beyond its limit.
 - Due to its mirror finish, the HX30CHSBRB stores heat rapidly and durably. The temperature rise of the film during the application using a heat gun is faster and more durable than the one in the case of the other products of the HX30000 series. This feature must be taken into account during installation. Beware of the film to avoid burning yourself.
 - If any bubbles appear during application, do not burst them, otherwise the film can be permanently damaged!

- For a perfect finish and an authentic mirror aspect, clean the film surface with the *Laser Wash* cleaner. Caution: do not clean the film within 24 hours following its application.
- Because of their structure, the gloss iridescent and metallised films will slightly mattify if 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.
- Because of their composition, the pearly iridescent films are fragile. After heating the film, it is mandatory to wait for at least 3 seconds before applying it (using a squeegee and gloves...). A shorter waiting time might considerably increase the risk of delamination of the upper film layer. In the case of film overlapping, the removal or repositioning of the upper film must be carried out with caution in order to prevent delamination of the upper layer of the lower film (particularly at the film edges).
- In the case of already painted substrates, self-adhesive media must only be applied onto undamaged original paintwork. If the paintwork is not the original and/or is damaged, the application and the removal are at the installer's own judgement and own risk.

Note: To ensure optimum opacity, the films in the HX30000 range contain a high concentration of pigments. In certain cases, when cleaning the film, coloured 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.

RECOMMENDATIONS FOR USE:

- Recommendation (*whenever possible*): Sunlight and prolonged exposure to weather and pollution may provoke ageing of the film⁽¹⁾. A vehicle wrapped with HX30000 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 colour of the films is controlled by HEXIS in order to ensure faithful reproduction of the colour tints. Nevertheless, should your project require the use of several rolls of a single colour reference, HEXIS recommends to use only one batch number of this colour.
- For further information on the application method of the HX30000 film, please refer to the Application Guide available on the "Professionals" pages, category "Full wrap" on our website at www.hexis-graphics.com.

STORAGE:

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

INDICATIVE DURABILITIES:

- The pigments (colouring) of the PVC influence the durability of the colours. An estimate of such a durability is obtained by accelerated ageing tests of the cast HX30000 films under UV rays and by outdoor exposure.
- The durability does not include any alterations from scratches or contamination of the product occurring during the application or the life cycle of the product.

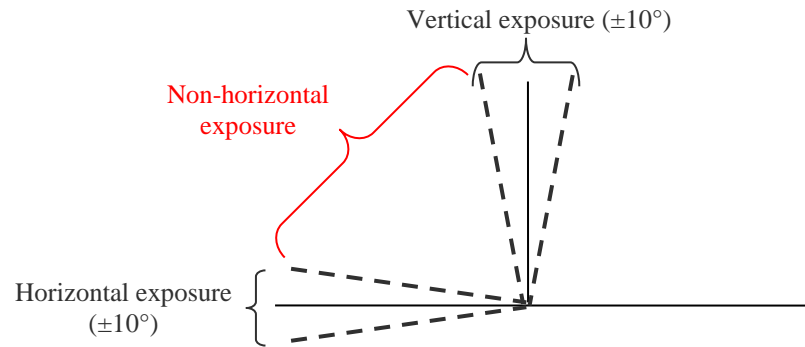
Tinge		Indicative durability (years)⁽²⁾ Vertical exposure ($\pm 10^\circ$) Central European climate
Range 1:	Matt white, black Colours, other matt tinges	5
Range 2:	Carbon effect HX30CA000B (except gold and silver) Alligator, leather effect	5
	Brushed aluminium HX30BA000B Silver carbon effect HX30CAGRBR, HX30CASBRB	3
	Variochrome Pearly iridescent (HX30JIMB/M, HX30OPAB/M, HX30RGOB/M, HX30VBOB/M, HX30BNEB/M, HX30BDMB/M, HX30GDPB/M)	2
	Chrome HX30CHSBRB	0.5

Chart 1: vertical durabilities⁽²⁾ Central Europe

- The results indicated above are notably obtained from outdoor vertical exposure ($\pm 10^\circ$ angle). The durability conditions indicated in Chart 1 are inherent to this position up to a few degrees. Any other position accentuates the climatic impacts and may further the appearance of gloss and colour alteration, even a slight dusting phenomenon may occur. Application on a vehicle bonnet/hood is particularly severe, because of the combination of a horizontal exposure and the heat coming from 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⁾ Central European climate
Non-vertical exposure	2
Horizontal exposure ($\pm 10^\circ$)	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 film 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 in the "Professionals" pages of our website at www.hexis-graphics.com.

NOTE:

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

(2) The durabilities indicated in this document do not constitute a warranty. They are an estimate of the duration during which the film keeps a correct appearance at the customarily observation distance.

A slight and progressive modification of the colour and brightness is a natural and unavoidable phenomenon inherent to the natural degradation of materials.

Because of 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 information released originates from laboratory measurements on a regular basis. However, it does not constitute a binding warranty. The seller is not held accountable for indirectly related damages beyond the replacement value of the purchased product. All specifications are subject to potential changes without prior notice. Updates of our specifications are automatically available on our website at www.hexis-graphics.com.