

TECHNICAL DATA SHEET CAST PLOTTER FILM HX30000 SERIES

Cast multilayered high performance vinyl, with a thickness between 110 and 280µm (depending on type), coated with a solventbased pressure sensitive acrylic adhesive. Structured adhesive for faster application and convenient air egress. Specially designed for vehicle full wraps and marking applications on vehicles with complex compound curves*. Gloss, matt, super matt or structured surface finish.

** The following products are intended for use on flat and slightly curved surfaces: HX30CHSBRB, HX30CASBRB, HX30CAGBRB.*

CHARACTERISTICS OF THE FILM:

	<u>Average values</u>	<u>Standard</u>
• Thickness (µm):		
• Carbon effect Silver HX30CASBRB:	240	
• Carbon effect Gold HX30CAGBRB:	280	
• Carbon effect other colours HX30CA000B:	150 to 180 (depending on colour)	
• Alligator effect HX30AL000B:	160 to 210 (depending on colour)	
• Sequin effect HX30SQ000B:	170 to 210 (depending on colour)	
• Leather effect HX30PG00B:	210	
• Brushed aluminium effect HX30BASILB:	130	
• Silver mirror finish HX30CHSBRB:	70	
• Matts & super matts	110	
• Variochrome	110	
• Tensile strength (N/25mm):	min. 15	HEXNFX41021
• Elongation at break (%):		
• Structured surface effects (carbon, alligator, sequin, leather, brushed aluminium...) and HX30CHSBRB	min. 50	HEXNFX41021
• Other types:	min. 90	
• Dimensional stability (mm): after 168 hours at 70°C	< 0.5	HEXRET001

LINER:

- Embossed siliconed liner.
- Stable under hygrometric variations.

ADHESIVE PROPERTIES:

(Average values measured at the time of the issue of this data sheet)

(N/25mm)	HX30CA000 (carbon effect)	HX30CASBRB (carbon effect silver)	HX30CAGBRB (carbon effect gold)	HX30AL00B (alligator effect)	HX30SQ000 (sequin effect)	HX30PG00B (leather effect)	HX30BASILB (brushed aluminium effect)	HX30CHSBRB (silver mirror finish)	Other type (matt, variochrome)	Standard
Peel on glass at 180° - 20 minutes after application	23	12	14	20	26	32	24	14	25	HEXFTM001
Peel on glass at 180° – 24 hours after application	26	14	18	25	30	31	26	18	26	
Initial tack	24	13	20	26	27	36	23	13	23	HEXFTM009
Release	0.40	0.30	0.30	0.30	0.30	0.30	0.40	0.40	0.30	HEXFTM003

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

RECOMMENDATIONS:

- Recommended minimum application temperature: +18°C (64°F). Apply preferably between 20°C and 25°C (68°F and 77°F).
- Usage temperature range: -40°C to +90°C (-40 °F to +194°F).
- Conformable, particularly suitable for 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 conditions during the application of these products:
 - Keep the deformation of the film below 10%.
 - The heating must be carried out with care: do not concentrate the air flow on a small surface.
- The HX30000 films with structured surfaces (carbon, alligator, sequin, leather...) are fragile products. The heating and re-heating steps require particular attention. Indeed, heating phases that are too long or too localised may lead to a tearing of the film.
- During removal the structured products tend to tear along the pattern of the structure.
- The HX30CA000 carbon effect (except HX30CA890B) is a fragile product and is easily scratched or marked. Handle with care.
- Matt (or super matt) colours are fragile and easily scratched or marked. Handle 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.

- For certain surface structures (alligator, sequin, leather) the repetition of the pattern may give the impression of a raster, in particular if the product is applied on large surfaces.
- 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 creases will result in slight marks on the film which cannot be removed later. Once the film is peeled off the liner it may be folded without any risk of damage.
 - Do not roll up the film too tightly (don not roll up without core, for example) as this will risk tunnelling between the film and the liner and mark the film irreversibly.
 - The HX30CHSBRB is more rigid than the other products of the HX30000 series and needs more strength for the same deformation. Wraps on large surfaces may require two installers and more time than other products of the HX30000 series.
 - Be careful not to go beyond the limits of the product: the HX30CHSBRB may show a slight irreversible alteration of appearance (whitening, loss of gloss), if the film is stretched / deformed beyond its limits.
 - Due to its mirror finish the HX30CHSBRB stores heat rapidly and durably. The temperature rise of the film during the application with a heat gun is faster and more durable than in the case of the other products of the HX30000 series. This behaviour must be taken into account during installation. Take particular care not to burn yourself when touching the film.
 - If any bubbles appear during application, do not pierce them or the film may be permanently damaged!
 - For a perfect finish and a true mirror finish clean the target surface with the *ECLAT'MAX* cleaner. Careful: do not clean within less than 24 hours before the installation of the film.
- For further information about the application of the CAST HX30000 film please refer to the Technical Biulletins for the HX20000-HX3000 under Professionals/Data Sheets on our website.
- The colour of the films is controlled by Hexis in order to ensure faithful reproduction of colour tints. Nevertheless, in the case of installs that require the use of several rolls of the same colour, Hexis recommends to use only one lot number of this colour.
- In the case of painted substrates self-adhesive media must only be applied onto the undamaged original paintwork. If the paint is not the original paintwork and/or if it is damaged, the application and the removal are at the installer's risk.
- 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 it is possible : during the day, park in the shade; during the night, park the the car in a closed garage (otherwise cover the vehicle with a loose protective cover).

ADHESIVE:

- Acrylic solvent based.
- Structured adhesive for faster installation and elimination of air bubbles.
- Immediate and permanent adhesion; optimum adhesion after 24 hours of contact.
- Dry application.

STORAGE:

- Shelf life (before application):

2 years if stored unopened in its original packing at a temperature between +15°C and +25°C (+59°F to +77°F) and 30 to 70 % relative humidity.

DURABILITY:

- The pigments (colouring) of the PVC influence the durability of the colours. An estimate of the durability is obtained by aging tests of the CAST HX30000 under UV rays and by natural exposure.
- The durability does not cover any alterations from scratches or due to 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
White, matt blacks	10
Colours, other matt and gloss tinges	8
Structured effect (carbon, alligator, sequin, leather, brushed aluminium), except gold, silver and chrome	5
Metallics (gold, silver, chrome)	4

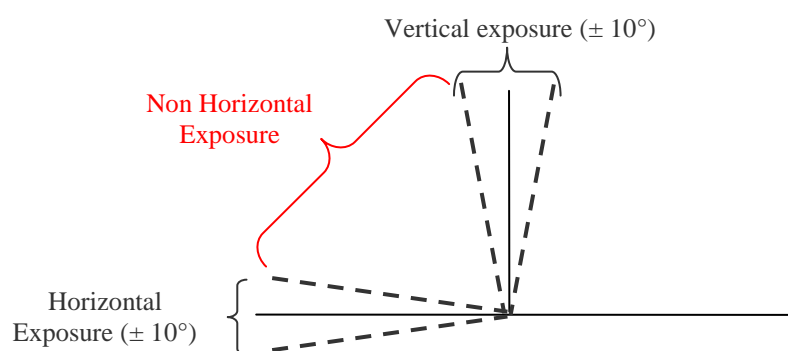
Chart I: vertical durabilities⁽²⁾ Central Europe

- The results above are obtained in particular under vertical ($\pm 10^\circ$) outdoor exposure. The durability conditions indicated in Chart I are inherent to this position up to a few degrees. Any other position accentuates the climatic impact and an alteration of gloss, colour and even a slight powder effect may occur. An application on a vehicle engine hood is particularly harsh because of the 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 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, exposure (environment, climate, exposure angle), the maintenance of the graphic, the amount of pollution.

Notes:

(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 guarantee. They are an estimate of the duration during which the film keeps a correct appearance at the usual observation distance.

The degradation of the materials (such as a slight and progressive change of the colour and the gloss) is a natural and unavoidable phenomenon.

Because of the great variety of substrates and possible application methods the installer must examine the suitability of the media for each application.

The methods of measuring for the standards quoted above are the basis for the development of our own measuring methods which are available on request (partial application). You are invited to enquire for the latest instructions in force.

All published data are based on measurements carried out regularly under laboratory conditions. They do, however, not constitute a warranty, representation or promise, express or implied as to the condition, quality, merchantability, fitness for a product, or that such product will satisfy any requirement for a specific property or capacity or special methods, all such warranties being hereby expressly disclaimed. The seller assumes no liability for claims beyond the replacement value of any product proven to be defective in material or workmanship and is in no way liable for direct, indirect, special, incidental damages or consequential loss including without limitation lost profits or loss of use, whether based on contract, tort or any other legal theory. Product specifications may change without prior notice. Our website is automatically updated: www.hexisgroup.com.