



TECHNICAL DATA SHEET - WRAPPING HX20000 Series

Range of products consisting of a 100- μ m to 110- μ m (upon reference), very high-performance, multi-layered, cast film, which is coated with a pressure-sensitive, solvent-based acrylic adhesive. Structured adhesive for faster application and air evacuation. Specially designed for full vehicle wraps and heavily deformed surfaces. Matt, satin or glossy surface finish.

FILM FEATURES:

| | <u>Indicative value</u> | |
|---|---|-----------------|
| • Thickness (μ m): | 100 μ m to 110 μ m (upon reference) | |
| | <u>Average values</u> | <u>Standard</u> |
| • Tensile strength (N/25 mm): | min. 15 | HEXNFX41021 |
| • Elongation at break (%): | min. 90 | HEXNFX41021 |
| • Shrinkage 168 hours at 70 °C (158 °F) (mm): | < 0.4 | HEXRET001 |

LINER:

- Embossed, silicone-coated PE paper 145 g/m² 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 (N/25 mm): | | HEXFMTM001 |
| after 20 minutes of application | 13 | |
| after 24 hours of application | 15 | |
| • Initial tack (N/25 mm): | 17 | HEXFMTM009 |
| • Release (N/25 mm): | 0.3 | HEXFMTM003 |
| • 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 air evacuation.
- Immediate and permanent adhesion, optimal after 24 hours of contact.
- Dry application.

USER'S INSTRUCTIONS:

- Minimum recommended application temperature: +15 °C (+59 °F). Apply preferably between +20 °C and +25 °C (+68 °F and +77 °F).
- Operating temperature range: -40 °C to +90 °C (-40 °F to +194 °F).
- For a uniform visual aspect, it is necessary to keep the same film application direction in order to ensure colour homogeneity according to the viewing angle.
- Conformable product, suitable for devices on wheels and vehicles only.
- 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.
- Due to their structure, the glitter and metallised 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. To be handled with care. If any traces remain after application, they can be reduced by slightly heating (max. 90 °C / 194 °F) the surface with a heat gun.
- Due to their particular structure, matt films may show dirt more easily than glossy PVC films. This type of film may require more frequent and/or more thorough cleaning. Cleaning can be difficult for films exposed to a particularly dirty environment (e.g. race cars, rally cars, etc.).

Note: To ensure optimum opacity, the films in the HX20000 range contain a high concentration of pigments. In certain cases, when cleaning the film, coloured traces may appear on the cleaning cloths. This action removes excess pigment from the film surface. This operation will not impair in any way the appearance or durability of the films. This effect may be intensified when using cleaning products containing solvents.

OPERATING RECOMMENDATIONS:

- Recommendation (whenever possible): Sunlight and prolonged exposure to weathering and pollution may provoke ageing of the film⁽¹⁾. A vehicle wrapped with HX20000 film must be protected from sun and bad 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 their colour tints. Nevertheless, in the case that your project requires the use of several rolls of the same colour reference, HEXIS recommend using only a single batch number of each reference.
- For more information on the application method of the HX20000 film, please refer to the Application Guide on the "Professionals" pages, category "Wrap vinyls", 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 (colour) 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 natural outdoor weathering.

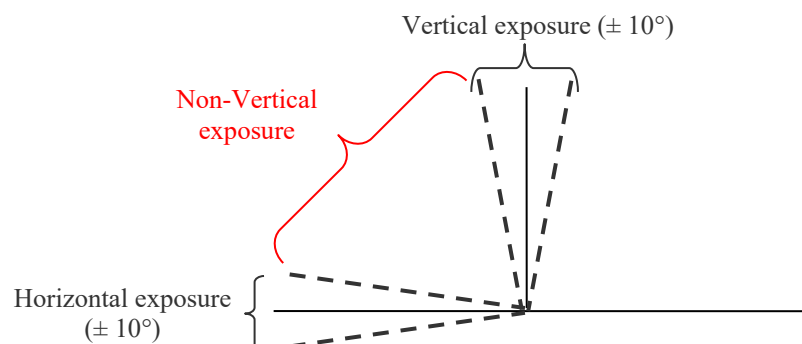
| Dominant colour | | Indicative durability (years) ⁽²⁾ Vertical exposure ($\pm 10^\circ$) Central European climate |
|-----------------|---|--|
| Range 1: | White, Black | 6 |
| Range 2: | Colours, other tints | 5 |
| | Metallic colours: (HX20877B, HX20990B/M, HX20948B, HX20GGIM, HX20871B, HX20BCMB, HX20MMAB/M, HX20905B/M, HX20423B, HX20219S, HX20G03S, HX20G04S, HX20196S, HX20558B, HX20033B, HX20352B, HX20228M, HX20236S, HX20GANM, HX20N03B, HX20661S, HX20V14B, HX20B32B, HX20B11B, HX20G07B, HX20437B/M) | 4 |
| | Glitter | 2 |
| | Fluorescent | 0.5 |

Chart 1: Vertical durabilities⁽¹⁾ Central Europe

- The results indicated below are obtained specifically in vertical ($\pm 10^\circ$) 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 or colour, or even a slight dusting may appear. Application to the vehicle bonnet is particularly severe, due to the horizontal exposure and the heat 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 | Dividing factor ⁽²⁾ Central European climate |
|--|--|
| Non-vertical exposure | 2 |
| Horizontal exposure ($\pm 10^\circ$) | 2.8 |

Chart 2: Dividing factor



- The real durability of a product depends on a large number of parameters, including, among others, the quality and preparation of the substrate, exposure (environment, climate, exposure angle), graphics maintenance, and 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 (discolouration, powdering, tanning...), it must be immediately removed from the vehicle in order to avoid any damage to the underlying paintwork.

(2) The indications of durability noted 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 colour and gloss is a natural and inevitable phenomenon inherent in 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 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.