



Ref. **CRISTAL+**
Range **Transparent**
Embossing **Gloss / Gloss**
(Top / underside)

Composition

- Polypropylene sheet
- Halogen free, no substances that can damage the ozone layer
- Inert waste, non toxic and 100% recyclable
- Decomposition products by fire : carbon dioxide CO₂, vapour H₂O

Chemical properties

- Resistant to water, fats, alcohols and some solvents.
- Polypropylene can swell if exposed to certain solvents.
- Polypropylene along with several other plastics, can be distorted by some conventional litho inks. If the Priplak® is to be used within a litho printed job, avoid litho inks with mineral oil distillate. Vegetable / Soya based inks or similar are known to work well. Check with your ink supplier. Perform trials if in any doubt.

Physical properties

Properties	Units	Test method**	Values**	Tolerances
Thickness	µm	ISO 4593	300 to 1200	+0,02mm / -0,03mm
Density	g/cm ³		0,91	+/- 0,01 g/cm ³
Haze value	%	ASTM D 1003 tested on 500µm sample	11	+/- 0,3 unité
Flexural Elastic Modulus	MPa	ASTM D 790 tested on 500µm sample	1100	+/-5%
Tensile Impact test	KJ/m ²	ISO 8256 tested on 500µm sample	420	
Elmendorf Tear resistance	mN	ISO 1974 tested on 500µm sample	3600	+/-3%

The physical properties of the material will change with the temperature conditions.

Near or below 0°C, the material will become brittle. Therefore, for low temperature applications, please contact us for a specific product.

As a thermoplastic, the material may loose stiffness, with increasing temperatures. It may also swell. These changes are noticeable around 70°C. The Melting point of our product is around 140°C.

** These values are given as indicative for a standard quality and based on the standards mentioned.

Sheets size tolerance

Sheet size : 0/+5mm (machine and cross direction)

Sheet flatness : 5mm on both sides

Use conditions

- Acclimatisation at room temperature 24 to 48h after delivery
- Pallets not to be stacked.
- Due to its gloss finish on both sides, this product is sensible to scratching issue. Therefore, it is recommended to handle sheets with precaution, but also to draughtproof equipment in order to minimize scratching issue during conversion

Printing on Priplak®

Printing UV technology

- Priplak® is corona treated on both sides to enable it to be printed in UV offset, UV screen, and UV digital. At the time of production, the surface energy is above 46 dynes/cm - but this declines over time. We recommend that Priplak is printed within 6 months from the date of production- for embossed grades, and 3 months for gloss products. (Exact production date is on the label). Keeping the material in its original wrappers and stored in a place without wide variations in temperature - or high humidity is very important. We recommend testing the suitability of the material prior to printing.
- Priplak suggest 4 sides trimmed material for automatic feeding. Our products are treated with an antistatic agent to help with feeding and reduce dust.
- Priplak® Cristal+ is printable on both sides. Innovative design gives great optical properties and 2 gloss sides with anti blocking characteristics that allow optimal productivity without needing to clean the blankets. or the best possible results, with thin gloss materials (≤ 350 microns), we recommend aerating the sheets.
- Priplak recommend special inks for polypropylene. Details can be obtained from your ink supplier. Preliminary trials/testing are advised.
- In order to protect the print and to prevent ink scratching, we recommend that you apply a protective varnish especially for UV offset.

Other printing technology

Conventional screen (1 pack or 2 packs inks.) Priplak® can be printed with a surface tension down to 40 dyne/cm. It is recommended to test before printing.

Cutting / Creasing on Priplak®

- Priplak recommend converting the material at temperature around 20°C.
- Cutting and creasing are possible on manual and auto-plate, as used in the cardboard industry. Creasing is mainly done "cold", i.e. normal working conditions. It can also be done with heat for high thickness or special cases.
- Use of semi-cutting blades for creasing is not advisable for Priplak® because they may generate an initial tear.
- In any case, the creasing process lengthens the material, and it is necessary to take this into account during the tooling design and manufacture.
- Cutting Priplak® in smaller sizes than delivered, especially A4 size and smaller, can release tension within the sheet, that can cause curl.

Assembling

- Priplak® can be glued, screwed, punched, perforated, sewn, ultrasonic / hot air welded...
- For glueing, we recommend 2 different types :
 - hot melt polyurethane reactive (PUR)
 - cyanoacrylates
- If Priplak® is in contact with printed surfaces (Priplak® used as cover) or laminating, we recommend that you test Priplak® compatibility with the other products involved. Indeed, some glue components, and inks containing a proportion of distillates, used in paper printing, can generate curl when in contact with Priplak®.

Compliance with legislation

Colour	toy norm EN 71/3	food regulation Directive 2002/72/EC	Coneg norm Directive 1994/62/EC	RoHS Directive 2002/95/CE
Natural 000	✓	✓	✓	✓

✓ complies with the mentioned standard.

Toys norm : NF EN 71-3 (March 1995)
relating to safety of toys – Part 3 : migration of certain elements.

Food regulation : comply with Directive 2002/72/EC (Commission of 6 August 2002)
relating to plastics materials and articles intended to come into contact with foodstuffs as well as its successive amendments
Nota bene : When legislation specifies maximum migration levels, these must always be checked on the finished product using the recognized test methods of the country concerned.

Coneg norm (USA) & Directive 94/62/EC :
relating to packaging and packaging waste
Heavy metals (cadmium, lead, mercury, and chromium (VI)) content below 100ppm.

RoHS Directive 2002/95/EC (European Parliament and the Council of 27 January 2003) :
comply with requirements on the restriction of use of certain hazardous substances in electrical and electronic equipment.
Compounds of heavy metals (Cadmium, Lead, Mercury and Chromium VI) and flame retardants (polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE)) have not been intentionally added in our formulation while manufacturing.
Therefore, our Priplak products do not contain any of these compounds with the exception of traces

Storage conditions

Store in its original plastic wrapping, at a temperature around 20°C, away from light.

The information contained within this document are non contractual and are based on data given by our suppliers and on the present state of our knowledge. They are given in good faith and considered as correct. The manufacturer reserves the right to change the product, or its technical characteristics, without notice. However, as we do not control post-processing techniques and conditions of use, this information may not be extended to end products and does not constitute a guarantee for any specific application. So, you are requested to check its validity and suitability for the intended method of converting and application.

PRIPLAK® CRISTAL+ is a registered trade mark of PRIPLAK.

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