PRIPLAK® SUPER CRISTAL+	**Technical Data Sheet**	Rev. 2011/008 Version 1

Réf. **Supercristal+**
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 CO_2, vapour H_20

Physical properties

Properties	Units	Test method*	Values*	Tolerances
Thickness	µm	ISO 4593	250 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	7	+/- 0,3 units
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	430	
Elmendorf Tear resistance	mN	ISO 1974 tested on 500µm sample	5000	+/-3%

* These values are given as indicative for a standard quality and based on the standards mentioned
** for enquiries less than 250µ, please contact us

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.
There is also a reaction to heating, 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.

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.

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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 in order to allow printing in UV offset (litho-printing), UV screen and UV ink jet printing. Surface tension, during production, is above 46dyn/cm but decreases with time. The treatment is guaranteed for 3 months from the manufacturing date, marked on labels. Priplak recommend a surface tension of at least 40dyne/cm to allow printability.
- Our products incorporate an antistatic treatment to improve automatic feeding and reduce dust.
- For thicknesses above 350 microns, Priplak® Supercristal+ 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.
- For thicknesses less than and equal to 300 microns Priplak use a non abrasive anti blocking powder to ensure easy feeding of the sheets. If necessary the residual powder can be removed from blankets in exactly the same way as fibres and dust are cleaned during carton printing. In the same range of thicknesses Priplak® Supercristal+ is printable on the reverse side without the need to turn the pallets. The printable side is uppermost.
- 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-platens, 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.

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Assembling

- Priplak® Supercristal+ can be glued, screwed, punched, perforated, sewn, ultrasonic…
- 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 proportion of distillates, used in paper printing, can generate curl when in contact with Priplak®

Storage conditions

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

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/EC
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.

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