

## Technical Data Sheet

### PRIMEX GLOSS

*Primex GLOSS* is coated Polypropylene sheet.

*Primex GLOSS* 100% recyclable with no harmful substance and no halogens.

Suitable for the production of stationary, promotion and printed boxes and other packaging items for indoor use  
Not suitable for horticulture labels or external labels. (Ask for special suitable grades.)

Embossing	GLOSS GLOSS	
Thickness $\mu\text{m}$	350-800	
Thickness tolerance $\mu\text{m}$	+10-30	
Size tolerance mm	+5-0	
Angular tolerance 90°	90 $\pm$ 0.2°	
Coefficient of thermal expansion	10 <sup>-4</sup> /K 5-80°C	1 mm for each meter for change of 10°C
Cold break temperature	5°C	Take care when designing items for cold temp. .

#### Printing & converting:

Acclimatize the sheets to room temperature before converting. During the winter this may take 48H if sheets were stored in an unheated warehouse.

Make sure that the core of the pallet and the edge are not in a different temperature.

**Surface:** Both sides of *Primex GLOSS* are primed. Do not use dyne pens to check printability since results may confuse. The dyne pens are optimized for corona treated PP or PE not for the primer.

Shelf life for UV inks is within 3 month see expiry date on the pallet label.

Old material may block after prolonged storage or improper storage conditions.

**Feeding:** Every pallet is tested 24H after production in order to assure that no blocking.

If sheets are blocked this may result of improper storage conditions since blocking was not present before shipment.

Ventilate sheets when feeding to the press in order to avoid double feeding and blocking.

Surface is delicate; avoid scratches when handling the product.

In many occasions printing and cutting are in different locations. Follow the following measures to avoid problems.

If sheets pass from one process to another do not tie the pallet and press the sheets.

If sheets must be transported to another location reuse original *Primex GLOSS* special packaging to avoid blocking.

If sheets are printed it is recommended to print on space between the articles to avoid blocking.

It is recommended to print a control bar all along the feeding faces to maintain planarity for the next process.

(Cutting, another pass in printing, etc.)

**Inks:** Use suitable inks for plastics. Always check carefully if ink is suitable to the job and process.

It is possible to print without OPV due to the high adhesion of ink to *Primex GLOSS*. Make sure that inks contain enough scratch resistance additives and cured well.

**Litho offset press settings:** if possible; press the first print tower dry, without printing. This will protect next plates and will increase productivity.

Excessive dumping water will leave stains on unprinted area and may destroy clarity and cause blocking.

Minimize water level dry well also with IR if possible and if needed.

Printing in reverse will result in excellent glossy flat look and may avoid the need of OPV.

This will enable to run another pass of white for better print contrast if the first white is not opaque enough.

OPV on unprinted areas will destroy clarity.



⊕ Packaging & Graphic sheets

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**Ink adhesion:** The adhesion depends on a few major factors. Ink type, surface treatment and UV energy. On *Primex Gloss* the surface is primed for better ink adhesion. Main cause of poor adhesion is insufficient radiation. Some inks are opaque and do not fully cure on the surface of the sheet. This may result in film flaking. One way to check if the problem is adhesion or curing is to turn the sheet and run it in the press without printing. The UV radiation will pass through the sheet and cure the ink on the contact with the sheet surface. Poor UV curing will result in ink flaking mainly on the crease lines and cuts. The cutting and gluing machine will be contaminated with ink powder. The advantage of *Primex GLOSS* it that under correct curing conditions these problems can be minimized.

**Color change:** UV light temporarily changes shade of the sheet to light green. This phenomenon is reversible and the colors lose green shade after few days or hours, depends on UV power.

**Wrap and distortion:** every PP sheet and *Primex GLOSS* as well can be distorted by chemicals. Some conventional Litho inks contain chemicals that distort the sheets. Avoid inks with high mineral oil distillates. There is a risk of distortion when PP sheet is coming into contact with paper printed items, especially when the ink is still fresh (high odor emits from paper). Perform trials prior to commercial production. Printing acrylic OPV on the Paper or laminating the paper that comes in contact with PP can reduce the risk.

**Cutting and creasing:** Acclimatize the sheets to room temperature before converting (also in the core of the pallet). Use blades 0.7mm thick double bevel. Crease on flat bed. Smoothness of bed is important to get high quality crease. When stamping use steel stamp for long stamp life. During design stage, be aware of the sheet grain. Don't end internal cuts straight, end with a radius. *Primex GLOSS* is relatively hard. Consider this in the design stage and when designing the dies.

**Foil blocking:** Use zinc or brass stamp. Select foils suitable for plastics and for the required print resolution.

**Bonding:** Use hot melt PUR on automatic folding gluing lines. Carefully select glue and gluing conditions in order to avoid bubbles and glue yellowing.

**Welding:** Hot air welding is not recommended and may not work. Ultrasonic and hot plate are possible.

**Conformity:**

*Primex GLOSS* is suitable for direct food contact under European Directive 10/2011 and amendments. Specific food contact declaration with SML will be supplied on request. Most EX-P standard colors confirms to the following norms. Check confirmation for special colors.

Norm	EN71/3 toy and safety standard	Food European Directive 10/2011 and amendments*	RoHS Directive 02/95/EC	Heavy metals Directive 94/62/EC
<i>Primex GLOSS</i> clear	YES	YES	YES	YES

\*Food contact conformity should be requester prior to placement of an order. Exten will not provide conformity declaration for articles already produced without particular notice from the client.

**Storage:** store in dry and shaded place. Do not store at temperature higher than 25°C, printability deteriorates. Do not double stack pallets, this may be dangerous if they collapse.

**Recycling:** Production rejects and waste should preferably be recycled instead of being disposed. *Primex GLOSS* is degradable by UV light and combustion. *Primex GLOSS* is not biodegradable.

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This information is given based on our current technical knowledge. This data neither guarantee certain characteristics nor the suitability to certain product, process and application.

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