

# PRINT-EX GEEMATT

Polypropylene sheet treated for printing.

Suitable for the production of stationary, promotion and food packaging items for indoor use

Special feature: very isotropic mechanical properties. It is not sensitive to tear in the machine direction.

Embossing Top: according to order	Gloss: Matt: Satin
Embossing Bottom	Gee-matt
Color	Natural with good contact clarity (any other color on request)
Thickness $\mu\text{m}$	200-300
Thickness tolerance $\mu\text{m}$	+20-30
Size tolerance mm	+5-0
Angular tolerance 90°	90 $\pm$ 0.2°

Specific gravity	Natural	200-300 $\mu\text{m}$	0.91-0.92
Coefficient of thermal expansion		10 <sup>-4</sup> /K 5-80°C	1 mm for each meter for change of 10°C
Glass transition temperature (Tg)		~5°C	Take care when designing items used in cold temp.

### Mechanical

Property	Method	Unit	Value
Melt Flow Index 230°C/2.16 kg	ISO 1133	g/10 min	2-3
Melting Point	ISO 3146	°C	145-155°C
Tensile Strength at Yield MD / TD	ASTM D 638 IV	MPa	28 / 26
Elongation at Yield MD / TD	ASTM D 638 IV	%	20 / 18
Tensile modulus	ASTM D 638 IV	MPa	850
Flexural modulus	ISO 178	MPa	900
Hardness Shore D-scale	ASTM D 2240		54
Tear	ASTM D1004	N/mm	>120
Elmendorf tear strength CD	ASTM D1922	N (200 $\mu$ )	>4.5

**Surface:** both sides are corona treated for screen and offset printing. The treatment is guaranteed for 6 month for conventional screen printing and 3 month for UV screen and Offset printing. Check production date before printing!

**For extended life and super ink bonding select PRIMEX grades**

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

**Wrap and distortion:** PP sheets 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 in contact with paper printed items, especially when the ink is still fresh (high odor emits from paper). Perform trials if such problem can accrue.

Printing acrylic OPV on the PP or laminating the paper that comes in contact with PP can reduce the risk.

**Cutting and creasing:** Acclimate 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.

Use rubber extractors between close cease roles in order to eliminate whitening.

When stamping use steel stamp for long stamp life.

During design stage, be aware of the sheet grain. Don't end internal cuts with straight end with radius.

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

**Welding:** the sheet can be welded by hot plate ultrasonic and hot air depends on application.

**Conformity:**

PRINT-EX sheets are suitable for direct food contact.

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	Toy safety Directive 2009/48/EC Flammability & Migration	COMMISSION REGULATION (EU) No 10/2011	RoHS Directive 02/95/EC	Heavy metals Directive 94/62/EC
	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 then 25°C printability deteriorates.

**Recycling:** Production rejects and waste should preferably be recycled instead of being disposed. The sheets are degradable by UV light and combustion. Sheets are not biodegradable.