

PRIME-EX X2 GEOS

PRIME-EX GEOS Is Polypropylene Graphic sheet specially formulated to replace PS/PVC for UV offset printing.

UV inkjet and other printing methods Main applications. Cards, visual communication like signs.

Primer applied on both sides	
Surface finish	Very fine matt surface on both sides
Thickness μm	300-1000
Thickness tolerance μm	+10-30
Size tolerance mm	Tight tolerance for offset See Figure 1
Angular tolerance 90°	$90 \pm 0.2^\circ$

Specific Gravity	White 0061A	350-1000 μm	0.98
Specific Gravity	White 0067A	350-1000 μm	1.00
Coefficient of thermal expansion		$10^{-4}/\text{K}$ 5-80°C	1 mm for each meter for change of 10°C

Property	Method	Unit	Value
Tensile Strength at Yield	ISO 527-2	MPa	35
Elongation at Yield	ISO 527-2	%	9
Tensile modulus	ISO 527-2	MPa	1900
Flexural modulus	ISO 178	MPa	1950
Izod Impact Strength (notched)at 23°C	ISO 180	kJ/m^2	5
Charpy Impact Strength (notched)at 23°C	ISO 179	kJ/m^2	9
Melting Point	ISO 3146	°C	165°C
Vicat Softening Point	ISO 306	50N-50°C per hour	85 °C
		10N-50°C per hour	150 °C
Heat Deflection Temperature	ISO 752	1.80 MPa-120°C per hour	58 °C
		0.45 MPa - 120°C per hour	100 °C
Hardness Rockwell - R-scale	ISO 2039-2		96
Tear	ASTM D1004	N/mm	>200
Tear—Simulation of cord	Internal EXTEN	N/mm (HIPS 50-100N)	>400

Cold break: GEOS is rigid and brittle in freeze temperature. Take care when selecting application.

Surface: Both sides are primed for offset printing. The primer guarantees printing for 12 month after production date.

Cutting and creasing: Acclimate the sheets to room temperature before converting (also in the core of the pallet). For label production use cannon press and drill. Cutting on flat bed requires high pressure due to the high hardness of the sheet. Sharp tools are essential in order to avoid brakes and cracks. The sheet is brittle in cold temperature so when cutting make sure that the sheet is not too cold.

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

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Preliminary test of the foil must be taken

Welding: GEOS cannot be welded with hot air or plate .

Bonding: Use hot melt PUR on automatic folding gluing lines. Carefully select glue and gluing conditions in order to avoid bubbles and glue yellowing. Preliminary test must be taken if the glue is applied on the coated side.

Conformity: Not confirmed to direct food contact.

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
PRIME-EX GEOS	Yes	No	Yes	Yes

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.

No armful emission when burned, just H₂O and CO₂
 No heavy metals, phthalates, plasticizers

Figure 1

