

PRINT-EX HMAF

FLAME RETARDANT POLYPROPYLENE SHEET

PRINT-EX HMAF Is an Eco-Friendly **Polypropylene** sheet specially formulated to replace PVC.

Main applications are indoor signs displays when fire protection is required according the European fire protection norms.

PRINT-EX HMAF is halogen free. Recyclable as normal PP and can be incinerated with other plastic waste for regeneration of energy.

Reference to identification standard:

EN 13501-1:2007+A1 fire classification of construction products and building elements Part 1 classification using test data from reaction to fire test.

EN ISO 11925-2:2010 reaction to fire test for building products-part 2 –ignitability when subjected to direct impingement of flame

EN 13823:2010 reaction to fire test for building products _ Building products excluding flooring exposed to the thermal attack by single burning item SBI.

PRINT-EX HMAF is classification depends on thickness	
300-700 μ	B s1 d0
800-1500 μ	B s2 d0

Surface finish embossing	Very fine satin surface on both sides
Surface grain id defined in the order submission	Gloss on both sides Gloss one side matt peach or satin other side
Thickness μm	300-700 800-1500
Thickness tolerance μm	+20-30
Size tolerance mm	Width (nominal)0-+3 length 0-+5 mm
Angular tolerance 90°	90±0.2°

Specific Gravity	White	0.96 Gr/Cm ³
	Back lite	0.92 Gr/Cm ³
Coefficient of thermal expansion	10 ⁻⁴ /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	%	9-15
Tensile modulus	ISO 527-2	MPa	1750
Flexural modulus	ISO 178	MPa	1850
Izod Impact Strength (notched)at 23°C	ISO 180	kJ/m ²	15
Melting Point	ISO 3146	°C	165-170°C
Hardness Shore - D-scale	ISO 858		60

Cold break: PRINT-EX HMAF is rigid and brittle in freeze temperature. Take care when selecting application.

Surface:

The surface is treated for printing.
It is printable with UV digital printing of most machine suppliers.

Inks: Use inks for corona treated PP Always check carefully if ink is suitable to the job and process.
Inks may alter the fire classification no matter what substrate is being printed, metal PVC,PP etc. It is the responsibility of the printer to select fire retardant inks.

Cutting and creasing: Acclimate the sheets to room temperature before converting (also in the core of the pallet). The sheet is brittle in cold temperature so when cutting make sure that the sheet is not too cold when converting.

Foil blocking: use zinc or brass stamp. Select foils suitable for plastics and for the required print resolution. Preliminary test of the foil must be taken

Welding: HMPP is can be welded with hot ait hot plate and ultrasonic welding

Bonding: Use hot melt PUR

Conformity

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	No	Yes	Yes

Storage: store in dry and shaded place. Do not store at temperature higher than 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.