



# MARNOT® XL HARDCOAT CLEAR FLAME RETARDANT POLYCARBONATE

Marnot films are a complete line of functional hardcoats designed for graphic arts applications.

Features of Marnot XL Clear Flame Retardant Polycarbonate include:

- Coated on UL94 V-0 Flame Retardant Gloss Polycarbonate
- Excellent abrasion and scratch resistance
- Outstanding for embossing and die cutting
- Excellent chemical resistance to common household cleaners and industrial solvents
- Second surface printability with solvent and UV inks
- First surface printability with clear, matte and texture UV cure inks

Marnot XL Clear Flame Retardant Polycarbonate is available in web width of 48" and in 10, 15, 20 and 30 mil thickness. Custom roll widths and sheet sizes are available.

## TYPICAL VALUES †

Physical	Test Method	Value	Unit
Specific Gravity	ASTM D792	1.2	g/cm3
Area Factor (Yield Factor)		0.0433	Lb/in3
Clarity	TM 10.76	98	%
Haze	TM 10.76	0.6	%
Light Transmission	TM 10.76	91	%
Gloss Back painted Flat Black 60 Degrees	TM 10.15	92	GU
Gloss Clear Over White Matte 60 degrees	TM 10.15	164	GU
Mechanical	Test Method	Value	Unit
Abrasion Resistance	TM 10.13	8	
Pencil Hardness	TM 10.97	HB	
Tensile Strength at Yield	ASTM D882	8400	psi
Break, MD		8800	psi
Tear Strength at Initiation	ASTM D1004	640	g/mil
Tear Strength at Propagation	ASTM D1922	30	g/mil
Thermal	Test Method	Value	Unit
Glass Transition		153	C
Shrinkage MD	30 min at 120C	0.1	%
TD		0.1	%

† These are typical values only and should not be confused with specification values. Specifications, tolerances and minimum values are available on request from your Tekra representative or from Tekra.

**POST UV CURING CHEMICAL RESISTANCE**

<b>Chemical</b>	<b>One Hour Surface Contact at 23C</b>	<b>4 hours surface contact at 23C</b>
Acetone	Pass	Pass
Concentrated HCl	Pass	Fail
MEK	Pass	Pass
Toluene	Pass	Pass
Methylene Chloride	Pass	Pass
Isopropyl Alcohol	Pass	Pass
Cyclohexanone	Pass	Pass
Ethyl Acetate	Pass	Pass
Xylene	Pass	Pass
Brake Fluid	Pass	Pass
Butyl Cellosolve	Pass	Pass
Hexane	Pass	Pass
	<b>24 Hours Surface Contact at 23C</b>	<b>24 hours surface contact at 50C</b>
Coffee	Pass	Pass
Fantastik <sup>1</sup>	Pass	Pass
Formula 409 <sup>2</sup>	Pass	Pass
Windex w/ Ammonia D <sup>1</sup>	Pass	Pass
Tide <sup>3</sup>	Pass	Pass
Downy <sup>3</sup>	Pass	Pass
20% Bleach	Pass	Pass
Mustard	Pass	Slight Stain
Mr. Clean <sup>3</sup>	Pass	Pass
Ketchup	Pass	Pass
Tea	Pass	Pass
Tomato Juice	Pass	Pass
Lemon Juice	Pass	Pass
Grape Juice	Pass	Pass
Vinegar	Pass	Pass
Milk	Pass	Pass
Armor All <sup>†</sup>	Pass	Pass
Ethanol	Pass	Pass
Salt Water	Pass	Pass
Sunscreen	Pass	Pass

**MASKING AND INTERLEAVING**

Marnot XL Clear Flame Retardant PC can be configured with mask on the second surface, or with mask on the first and second surfaces. If no protective masking is selected, Tekra will not warranty against spot abrasions or other damage to the uncoated surface in transit.

**PROCESSABILITY**

Tekra has made a good faith effort to validate the suitability of this product with common processing methods including screen printing, laser cutting, die cutting and embossing. However, because of the variability between different types of equipment, methods and processing conditions Tekra recommends that you work with your Tekra representative, your ink representative and your machine manufacturer to determine the substrates, inks, machinery and settings that work best in your particular situation.

The application suggestions, specifications and other data described here are based on experience that is believed by Tekra Corporation to be reliable. Because of the characteristics of these products, you should, before using these products in production, perform your own tests to determine to your satisfaction whether these products are acceptable and suitable for your particular purposes under your operation conditions.

Any order for these products will be subject to Tekra's terms and conditions of sale.

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<sup>1</sup> Registered Trademark of SC Johnson

<sup>2</sup> Registered Trademark of the Clorox Company

<sup>3</sup> Registered Trademark of Proctor and Gamble

<sup>†</sup> Registered Trademark of ArmorAll Products Corp.



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