



# MARNOT<sup>®</sup> XL HARDCOAT MATTE POLYESTER

Marnot films are a complete line of functional hardcoats designed for graphic arts applications. Features of our hardcoat include:

- Available in 20, 35, 55, 75 and 90 GU matte levels.
- Excellent abrasion and scratch resistance
- Outstanding embossability and diecuttability
- Excellent chemical resistance to common household cleaners and many other substances
- First and second surface printability with solvent and UV inks, including clearing inks

Marnot XL Matte Polyester is available in web widths up to 49" and in 5, 7 and 10 mil thicknesses.

## TYPICAL VALUES ‡

| Physical                                   | Test Method           | Value  |    |    |    |    | Unit   |
|--|-----------------------|--------|----|----|----|----|--------|
| Specific Gravity                           | ASTM D792             | 1.3954 |    |    |    |    | g/c3   |
| Area Factor (Yield Factor)                 |                       | 0.5    |    |    |    |    | lb/in3 |
| Clarity                                    | TM 10.76              | 70     | 58 | 50 | 34 | 25 | %      |
| Haze                                       | TM 10.76              | 8      | 10 | 16 | 29 | 55 | %      |
| Light Transmission                         | TM 10.76              | 88     |    |    |    |    | %      |
| Resistance to Humidity                     | 720 hrs @38C, 100% RH | Pass   |    |    |    |    |        |
| Gloss Backpainted Flat Black<br>60 Degrees | TM 10.76              | 55     | 45 | 33 | 20 | 10 | GU     |
| Gloss Clear over White Matte<br>60 Degrees | TM 10.76              | 90     | 75 | 55 | 35 | 20 | GU     |
| Mechanical                                 | Test Method           | Value  |    |    |    |    | Unit   |
| Abrasion Resistance                        | TM 10.85              | 8      |    |    |    |    |        |
| Pencil Hardness                            | TM 10.59              | H-2H   |    |    |    |    |        |
| Tensile Strength at                        | ASTM D882             |        |    |    |    |    |        |
| Yield, MD                                  |                       | 13000  |    |    |    |    | psi    |
| Yield, TD                                  |                       | 13000  |    |    |    |    | psi    |
| Break, MD                                  |                       | 24000  |    |    |    |    | psi    |
| Break, TD                                  |                       | 27000  |    |    |    |    | psi    |
| Thermal                                    | Test Method           | Value  |    |    |    |    | Unit   |
| Glass Transition                           |                       | 70C    |    |    |    |    |        |
| Shrinkage                                  | 30 min at 120C        |        |    |    |    |    |        |
| MD   |                       | 0.5    |    |    |    |    | %      |
| TD   |                       | 0.4    |    |    |    |    | %      |

‡ 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 Corporation.

CHEMICAL RESISTANCE

| Chemical                        | One Hour Surface Contact at 23C | 24 hours surface contact at 23C |
|---------------------------------|---------------------------------|---------------------------------|
| 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                            |
|                                 | 24 hours surface contact at 23C | 24 hours surface contact at 50C |
| 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                            |
| Top Job <sup>3</sup>            | Pass                            | Pass                            |
| Armor All †                     | Pass                            | Pass                            |
| Ethanol                         | Pass                            | Pass                            |
| Salt Water                      | Pass                            | Pass                            |
| Sunscreen                       | Pass                            | Pass                            |

MASKING AND INTERLEAVING

Marnot PET can be configured with interleaving, mask on the second surface, or with no masking or interleaving. If no protective interleaving or masking is selected, Tekra will not warranty Marnot PET against spot abrasions or other damage to the uncoated surface in transit.

CUSTOMIZABILITY

Marnot PET is stocked in roll form on 5, 7, and 10 mil thicknesses and stock sheets are available in 7 mil. Any stock can be custom slit or sheeted for maximum convenience for your applications.

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.

<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  
† Registered Trademark of ArmorAll Products Corp.



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