

# COILWORLD

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A variety of printed polyester films that can be applied to any metal during the coil coating process.

## Designer Coil Coating

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Imagine a coil coating line taking one base metal and converting it into copper, brushed stainless steel, wood, stone, or any photographic look. Now imagine that this can be done just by pushing a button that changes the roll of polyester film that works this magic. All of this has been reality in Europe for several years now and is currently being introduced into the North American market by Enhancement Technologies Incorporated (ETI).

ETI, based in Liberty Corner, New Jersey represents the Sublitex Division of Miroglio Textile s.r.l. based in Alba, Italy. ETI was founded in 1985 to develop and market its technology of transfer printing onto vinyl substrates. An example of the success of this technology is the vinyl vertical blinds sold by the major retailers. With ETI's applied designs the blinds are transformed from commodity draft and light blockers into fashionable window treatments that are pleasing to the homeowner.

### **Printing, Decorating Technology**

Miroglio is the second biggest textile company in Italy with annual sales in excess of one billion Euros. The Sublitex Division is their printing and decorating technology unit that has been creating new ways to enhance product since 1976.

Their latest creation, developed in conjunction with the Mitsubishi Group, is called "Texcover". Texcover is a family of printed polyester films designed to be applied to any metal during the coil coating process. Since film is the perfect print surface, when it is printed by Sublitex with their state of the art rotogravure printing equipment, the magic described above is able to happen.

Texcover films are designed for interior and exterior uses. For interior applications a high gloss film is used to impart the brilliance of the brushed stainless and copper metallic looks desired for appliances and other end products. Once Texcover is

applied, it is hard to tell that the basic cold rolled steel or aluminum is not a much higher priced metal. The 0.8 mil thick film is also anti-fingerprint and passes all of the normal tests for abrasion, dry heat, cold liquid, and resistance to common stains. It can further take a zero T-bend without splitting or losing adhesion, so, it is fully formable.

For exterior applications a special form of Texcover polyester film has been developed. Here, durability of the film laminate, as well as the quality of the printed design, is critical. Slightly thicker for added toughness, this matte film also contains UV absorbers and stabilizers to shield the design and the underlying metal from the harmful effects of sunlight and weathering. You can see from the photographs that there is no change to the design appearance after 5,000 hours of Xenon Testing and after 2,880 hours of EMMAQUA testing. These surface characteristics of the film have also been

evaluated after 5,000 hours of Xenon testing for ISO 4628/2 (Blistering), ISO 4628/3 (Rusting), ISO 4628/2 (Cracking), and ISO 4628/5 (Flaking) with no changes reported in the film surface. Mitsubishi also laminated the raw film to steel and placed it in a QUV with water spray for 13,400 hours before



Sublitex-Miroglio's state-of-the-art printing facility which will come on line in August of this year.

any visible cracking appeared after bending. Over a hundred samples of printed Texcover film are currently undergoing South Florida testing and 15 samples are in continued EMMAQUA testing in side-by-side tests with samples of PVDF coatings. "EMMAQUA is unique in that it concentrates natural sunlight via 10 highly reflective, specially coated mirrors onto the specimen target area with an intensity of approximately eight suns." (Atlas-MTS website)

In terms of warranty coverage, Sublitex is working with its coil coating customers to develop warranties for the total finished laminate product. Since it is so new to the US, a cautious approach is being taken to first develop vertical applications for outdoor use until further testing can be completed. In Europe, where Texcover has a longer history, the biggest end use for Texcover exterior film is in metal

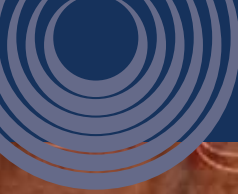


5,000 hours of Xenon accelerated exposure (central area) versus unexposed metal (outer area).

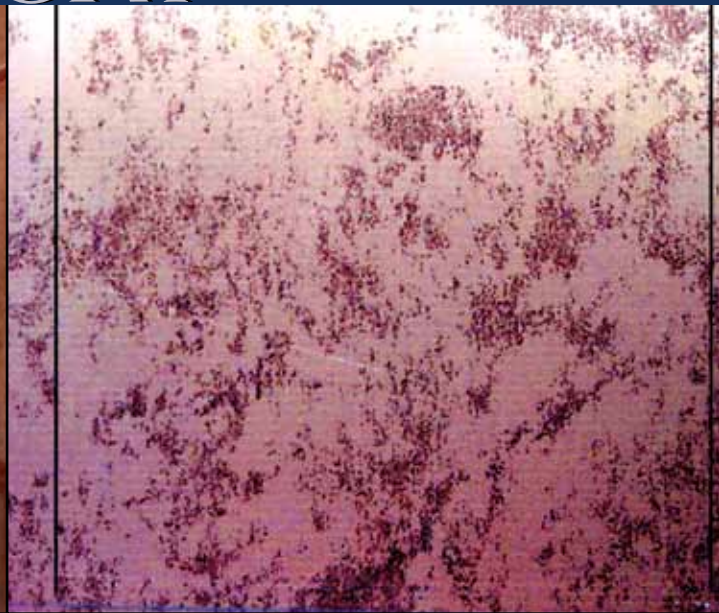
roofing. Creating copper roofs from aluminum for half the price of real copper is a prime example.

#### Lamination Process

Texcover is applied via a laminator during the coil coating process. While the Texcover inks act as an adhesive, a specified liquid adhesive is first applied to the coil to insure a long lasting bond between the film and the metal. The optimum temperature range for attaining good adhesion varies from 320 degrees F to 360 degrees F depending on the type of metal coil and base coating. Sublitex has a technical support staff available for assisting with trials to achieve the optimum results for each desired substrate. It is currently being marketed in standard widths suitable for 50 inch and 60 inch wide coils. Special slit widths are available upon request. Full



# COVER STORY



European Texcover—Cooper Metal Roofing Tile.

Exposed area (inside lines) versus unexposed area (outside of lines) after 2,880 hours of EMMAQUA Testing (ASTM G90).

technical reports and catalogs of designs are also available through Enhancement Technologies [www.enhancetech.com](http://www.enhancetech.com).

Texcover gives the coil coater and their customers a whole new range of possibilities for high quality design that can, like an alchemist, transform

base metals into “gold” (or brass or stainless steel or silver or copper or wood or stone or anything you want it to be). With the addition of Texcover, commodity metals are placed on the coil coating line and designer coils come off.

## Bringing Italian Design to the Coil Coating Line

Enhancement Technologies Inc. (ETI) is the North American provider of Texcover™ printed polyester films produced by Miroglia of Alba, Italy. Interior and Exterior grade films available. Transform basic metals into brushed stainless, copper, titanium, or silver. Extensive range of beautiful woodgrains, marbles, distressed metals, and photographic looks.



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