CAST AND CURE

An Interview with Breit Technologies

The trend to influence consumer buying behavior at the retail level continues to drive the packaging industry to explore the benefits of special effect labels and package design. Today, both minor and major consumer brands have embraced this simple process and discovered new ways of differentiating their brands in highly competitive product categories.

Cast and Cure™ technology is used to produce holographic and other unique finishes on a wide variety of printed substrates. It provides a decorative solution that addresses three common stumbling blocks in package decorating:

1. It does not adversely affect the recyclability or compostability of a package.
2. It provides a dynamic visual appeal.
3. It is a cost-effective decorative solution.

In advance of the American Packaging Summit, we spoke with Breit Technologies about the advantages of using Cast and Cure to propel packaging innovation and increase a package's shelf-appeal.

What is the history of the Cast and Cure method and how has Breit Technologies become the leading company employing this process?

The origins for the original Cast and Cure (C2) concept are not exactly known. Similar processes to today's C2 have existed for years to create gloss finishes and texture features into materials. In the early 2000's the idea to use a clear film to transfer energy to cure UV resins and "Cast" a desired feature was born.

As coating equipment and film technologies advanced, Tim Cain and Bill Granfors saw the opportunity to advance and enhance C2 applications into packaging and other products. With decades of experience in the printing industry, Breit Technologies was founded in 2005 to produce C2 films and application machinery for a global printing/packaging industry.

Breit Technologies began to introduce the C2 process to the commercial printing industry and brand owners, offering an alternative to traditional decorative methods as a cost-effective and environmentally-friendly application. This also helped evolve the landscape for how brand owners create shelf appeal and brand identification.

Today, Breit Technologies is the world's leading developer and supplier of C2 technology with over 20 stock holographic casting patterns. With the ability to create custom holographic patterns or modify existing patterns to fit each customer's unique needs, the decorative possibilities for today's brand owners are virtually endless.

What does the Cast and Cure process entail?

The C2 process starts with an energy curable OPV (Over Print Varnish) coating. Curing of the OPV can be accomplished by UV, UV LED or, for food packaging, EB curing stations. The energy cured coating is applied directly to a printed web. A web of C2 film is then laminated to the wet surface via a simple laminating nip station. The film's unique micro-embossed surface will now impart (cast) its pattern onto the coated surface.

Immediately following the curing station, the C2 film is delaminated from the printed web and rewound, whereupon the film can be reused again and again.

A single 5,000 foot roll can be used 20+ times producing more than 100,000 feet of finished labels or packaging materials. Our C2 film is made from BOPP with no further additives or chemistry, and is readily recyclable.

How does Cast and Cure help to create product differentiation and increased visual impact on the shelf?

Product packaging with holographic patterns that change color or appear to move will always be eye-catching. C2 decorative finishes can also appeal to the consumer's sense of touch.

Breit Technologies has perfected several textured effects that provide another unique dimension to brand positioning. Soft touch finishes, brush stroke and linen textures are good examples.

This treatment addresses three common stumbling blocks in package decorating:

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2. It provides a dynamic visual appeal.
3. It is a cost-effective decorative solution.

A custom Cast and Cure holographic pattern was used to enhance the original package design of this toothpaste brand in a highly competitive consumer products niche.

Which applications are Cast and Cure best suited to?

For the most part, C2 applications and advancements have been driven by brand owners seeking to attract consumer attention, create brand differentiation, protect their brands from a growing world of counterfeiters, or all of the above.

Both sheet-fed and web applications are becoming common place in the industry. Options are available for narrow and wide formats in both inline or offline as a secondary process. There are only a couple limitations in terms of materials that accept the Casting process. In general, if the material can be surface printed, C2 can be applied.

Special equipment exists to ensure proper and consistent C2 results while maximizing the film reuse. In many cases, a standard cold foil set-up is a good starting point for testing and sample runs.

Breit Technologies has engineered specialized C2 equipment to cover almost all aspects of the printing industry regardless of stock/substrate and specialty. Most recently, we have embraced food packaging applications with cereal products requiring special designed EB curing technology.

Cast and Cure holographic effects are part of a major marketing push for the new Lucky Charms package showcasing the new marshmallow. This new package was produced using EB technology. The packaging has been so successful, many collectors are still purchasing them on eBay.

What are the benefits of Cast and Cure over hot or cold foiling, or other similar processes?

Unlike foils which are consumed with each application, there is no material transferred to the printed web. The C2 film is not consumed with a single application, but can be reused a multitude of times depending upon the application and equipment. With each re-use of the material, the applied cost becomes exponentially less expensive.

For example, if a customer achieves 10 uses of the C2 film, that is the equivalent of buying the material for 1/10 of the cost. Customers enjoy cost savings, reduced film shipping costs, minimal film storage and inventory space, and an overall lower environmental footprint.

Part of the allure of the C2 process is also its flexibility. The effect is applied only where the cast coating is applied, allowing for a wide range of design options from spot to flood coverage. Thus, the need for opaque white is eliminated. The C2 process does not change the finished packaging's recyclability. There are no VOCs involved in the process, and the material itself is 100% recyclable, making the C2 process extremely environmentally friendly.

This micro embossing technique allows for the application of light-refracting surface manipulation to printed materials at a significantly reduced cost compared to traditional applications (holographic lamination or hot/cold foil). C2 is also a fully sustainable process, providing designers a broad pallet of decorating options while maintaining environmental consciousness.

According to Dan Plash, sales manager at Breit Technologies, the Cast and Cure process is "probably the least expensive, highest visual impact effect on any given label or carton that's out there today."

Breit Technologies is the world leader of the Cast and Cure™ technology, a decorative coating process for package printers that forms unique, high quality surface finishes such as ultra high gloss, matte, texture and holographic patterns. These effects are ideal for creating visual impact and product differentiation on retail shelves and are often incorporated as an anti-counterfeiting feature. Today Breit Technologies is a global supplier of Cast and Cure solutions to customers in over 50 countries, providing both the specialized high-speed equipment as well as a vast inventory of films with an extensive array of finishing patterns. Equipment is available for sheet fed applications, narrow to wide web applications, and can be integrated with existing processes in-line, off-line or in by-pass mode. The process uses eco-friendly, VOC-free inks and varnishes, is less expensive than hot and cold foil stamping, and can use UV, LED or EB curing.

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