

PLASTIC COATING & PRINTING OPTIONS FOR GLASS PACKAGING

ROBUST, CUSTOMIZED, HIGH INTEGRITY PACKAGING FOR HIGH VALUE AND DISTINCTIVE PRODUCTS





KEY FEATURES AND BENEFITS OF PLASTIC COATING OPTIONS





SGD Pharma's plastified glass packaging for pharma applications combines the most desirable qualities of both materials to deliver a robust, premium, fully customizable packaging solution. It offers a unique opportunity to deliver your product in perfect condition, in a distinctive branded wrapping. Whether your goal is to safeguard product quality, extend shelf life and ensure rugged protection, or to boost visual appeal, SGD Pharma's high value plastic coated glass will suit your application.

Wrapping glass in plastic improves its mechanical resistance further, lowering drastically the risk of shattering, eliminating the risk of injury for the patient, while at the same time opening up new design opportunities for your brand.

GLASS

- is natural,
- is impermeable,
- has unrivalled barrier properties it is impermeable to gases, notably to oxygen, and amber glass is also a highly effective barrier to light,
- has extremely low levels of extractables compared with other materials,
- is well-established as a safe material for packaging.

PLASTIC COATING ADDS

- Unsurpassed versatility with respect to design, color and feel,
- Resistance to mechanical shock,
- Additional protection from light degradation coatings may be opaque, or transparent with a UV filter.

*The color spectrum for yellow, blue & white are compliant with American & European pharmacopeia as the light transmission through the glass does not exceed 10% in the range of 290-450nm wavelengths



SGD Pharma's plastified glass packaging embodies the best properties of both materials and allows you to:

Protect products from the harmful effects of light and oxygen to maintain the highest levels of quality and maximize shelf-life.

Enhance customer safety in the event of a breakage by trapping broken glass within a safe plastic envelope.

> Develop a robust packaging solution that is resistant to mechanical shock.

Create a distinctive, branded look that differentiates products and boosts visual impact.

Improve patient experience via a soft, tactile, or easy grip finish for example.

Comply with regulation for pressurized

aerosols (EU Directive 75/324/CEE).

Apply clear labelling, including written instructions, with no requirement for additional labels, processes, or machinery.

SET YOUR PRODUCT APART FROM THE COMPETITION WITH A PACKAGING SOLUTION THAT REFLECTS AND PRESERVES ITS QUALITY.



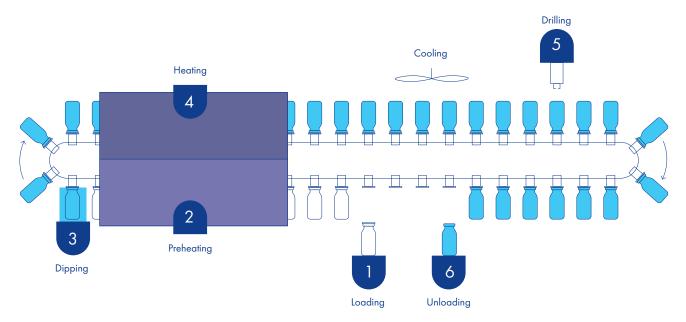
Precision processing and exemplary control

Established in 1896, SGD Pharma is a global leader in glass packaging, with five ISO 15378 certified manufacturing sites in Europe and Asia. These sites manufacture an extensive portfolio of vials, ampoules, bottles and droppers in Type I, II and III glass, amber and clear, producing more than 2 billion vials each year. For over a century SGD Pharma has been at the forefront of glass manufacturing technology and innovation and we continue to invest in state-ofthe-art facilities. With a strong focus on customer needs, globally recognized know-how and best-in-class quality, we will work with you to develop and deliver the premium plastified packaging solution your product deserves.





The production of plastic coated packaging begins with the loading of your chosen bottle - Alpha bottle, dropper, aerosol or tablet bottle - on to the accumulator table, for efficient process feeding (1). Bottles are preheated for 3 - 5 minutes (2), exiting the oven at 160°C primed for dipping, typically in 60% PVC (3). Firing for 3 - 5 minutes at 240 - 260°C (4) ensures a tough, stable and durable coating which is drilled (5) to allow the safe escape of gases in the event of pressurized packaging failure. The resulting product is unloaded (6) from the wrapping process onto a conveyor for transportation to printing.





Decoration, branding and or product information are applied using UV ink silkscreen printing. After printing, the product cures in the oven for a few seconds. The product is decontaminated and shrink wrapped prior to visual check, storage and/or shipping.

SGD Pharma deploys state-of-the-art analysis, control and inspection to ensure optimal and consistent product quality.

Our systems include:

- rigorous quality assurance for incoming inks and plastics, including viscosity and color testing,
- online, automated weight control and dip level inspection, checking the height of PVC on the vessel neck,
- extensive manual sampling and mechanical testing (elongation and mechanical strength),
- a comprehensive visual inspection regime for weight of applied plastic, dip height, product appearance, and pallet quality and cleanliness.

These systems ensure that your packaging will be manufactured to the same high standards, month after month, year after year, safeguarding the integrity of your product and brand.







P.OWER

TAC Burners 39/20



SGD Pharma is a strong and responsive partner for the development of unique plastified glass packaging solutions. The development process begins with a choice of glass container. We offer an industry-leading portfolio of pharmaceutical grade glass packaging including Alpha bottles, droppers, aerosols and tablet bottles suitable for coating in and extensive variety of designs and volumes. Plastic coatings come in an infinite range of colors so you can match your branding, tailor packaging to reflect the product and boost shelf appeal. Options for colour extend to unique Pantone specification to ensure the exclusivity of your packaging choice.

Plastic coating is available for:

Alpha bottles



From 30ml to 500ml 15ml for single dose bottle

Droppers

Aerosols

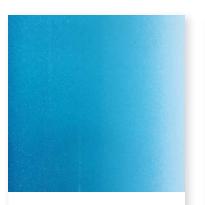


Tablet bottles





BEYOND COLOR: TAKE A CLOSER LOOK AT THE FINISHES AVAILABLE



PEARLESCENCE for a timeless, high quality look



FROSTED for a soft touch finish



TRANSPARENT for a clean look with clear product



OPAQUE for simple UV protection with brand consistent coloring



GLOSSY For an alluring finish with instant shelf appeal

Complete your packaging with screen printing or serigraphy, a stencil-based process, using 1 to 3 colors of UV ink. This is the ideal way to add decoration, further branding, directions for use and legal information. This approach eliminates any requirement for additional labels, as well as the cost and effort of applying them.

Alternatively, a label or shrink-wrapped printed sleeve can be added as a final touch to provide further information or strengthen branding.

The end result — an optimized, robust, packaging solution that reinforces and represents your brand.

GLOBAL FOOTPRINT

USE THE KNOWLEDGE AND STRENGTH OF OUR WORLDWIDE NETWORK OF 90 PARTNERS AND DISTRIBUTORS TO YOUR ADVANTAGE.









SGD Pharma - Tour CB16 - 17 place des Reflets - 92097 Paris La Défense Cedex - France +33 (0)1 40 90 36 00 - www.sgd-pharma.com For more information, please contact your local representative









