

Pharma Primary Packaging



Pharma
Primary
Packaging

 Creating
confidence



**At LOG, we
are committed to
Creating Confidence**



**Confidence that your product
will be protected and delivered in
the best possible condition**

LOG is committed to the highest standards of quality required in the pharma-packaging industry as reflected by our ISO 9001 and ISO 15378 certifications. In addition, both production sites in Israel and Hungary have successfully passed audits by leading pharmaceutical companies.



**Confidence that LOG will deliver
cutting-edge innovation that will meet
your current and future market needs**

As a well-known market leader in innovative barrier packaging solutions, LOG will continue to offer advanced products in the fields of:

- Active and passive barrier packaging solutions
- Child resistant packaging
- Anti-counterfeit and tamper evident solutions
- Smart packaging



**Confidence that LOG is the right
choice as your long-term partner**

Established in 1971, LOG has spent more than 47 years building a wide range of standard and customized packaging solutions and providing dedicated and responsive customer support to leading global pharmaceutical companies. As a privately owned, profitable and constantly growing company, LOG will confidently support you as a long-term partner.

Barrier Packaging Solutions

Most APIs (up to 90%) used in pharmaceutical formulations are sensitive to moisture and/or oxygen and require passive or active protection.

With the ever-increasing complexity of the APIs and their drug formulations, innovative barrier packaging solutions are required for more and more pharmaceutical products in order for them to successfully pass stability tests.

LOG has developed a series of world-leading barrier packaging solutions to extend the shelf life and protect innovative and generic drugs from the exposure to moisture and/or oxygen. Made from up to six layers, LOG's barrier packaging solutions are available for liquids and solids, and come in standard sizes from 15 to 1500ml and with neck finishes between SP20 and SP53.

The containers are compatible with LOG's screw and CR closures and can be used on existing filling lines without the need for any modifications.

In addition to the standard barrier packaging portfolio, LOG also offers to partner with customers to develop tailor-made barrier packaging solutions.

LOG's market-leading Barrier Packaging solutions:

- Increase confidence to pass drug stability tests
- Shorten drug formulation development time
- Reduce the need for desiccants with the goal of eliminating them
- Extend drug shelf life
- Reduce head space and packaging size
- Reduce total cost of ownership
- Are successfully used and endorsed by global pharmaceutical companies

LOG's Barrier Packaging Solutions are available in three product families:



OxyBlock™
Dramatically reduces
oxygen permeation



MultiBlock™
Dramatically reduces both
oxygen & moisture permeation



MonoBlock™
Dramatically reduces
moisture permeation

For more information, visit www.barrierbottle.com

up to **12x**
better*

Moisture barrier performance

Oxygen barrier performance

100x
better*

*Compared to a standard HDPE bottle.

Active Barrier Packaging Solutions

The Perfect Match for LOG's Barrier Bottles

ActiveGuard™

Standard desiccant solutions, which include canisters or sachets, are commonly placed loose inside bottles. This has the following drawbacks:

- Desiccants might fall out and not be returned to the bottle
- Desiccants could be swallowed by mistake
- Desiccants are in direct contact with the tablets, which might cause the tablets to dry out, possibly chip, break or disintegrate.

LOG's innovative and patent-pending ActiveGuard™ solves all of these challenges. The ActiveGuard™ is placed inside the neck of LOG's specially designed Barrier Bottles and is locked into place to prevent it from moving in any direction. The ActiveGuard™ is prefilled with moisture desiccants and/or oxygen absorbers according to customer requirements.

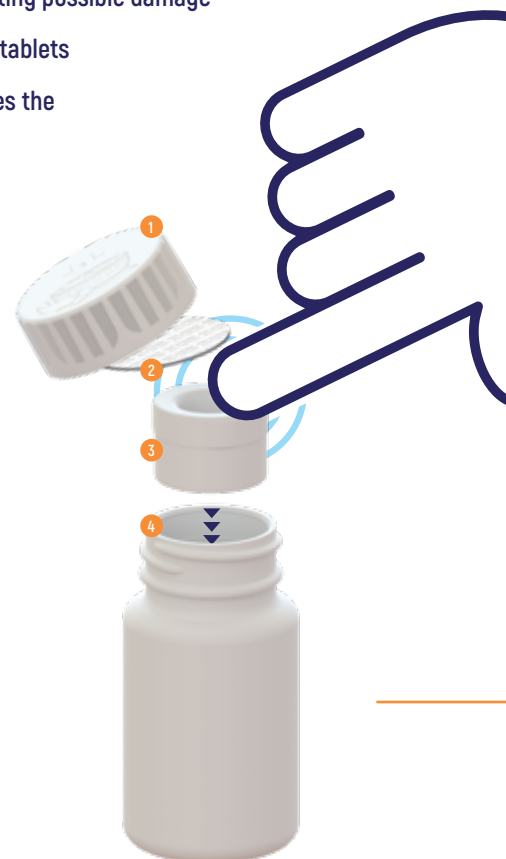
The maximal amount of desiccant contained in the ActiveGuard™ is 2 grams for the 33mm neck finish and 4 grams for the 38mm neck finish.

Benefits:

- Desiccant cannot fall out of the bottle
- Desiccant cannot be swallowed by mistake
- Desiccant does not come in direct contact with the tablets, preventing possible damage
- Reduces head space while still allowing the easy dispensing of the tablets
- Contrary to integrated desiccant closures, the ActiveGuard™ enables the use of an induction heat seal liner to hermetically seal the bottle and provide tamper proof evidence.
- Formulators have the freedom to specify the exact amount of desiccants and/or oxygen absorbers as required by the formulation.
- Controls the release of tablets

A Complete Packaging Solution

- 1 Child Resistant (CR) Closure**
CR certified according to ISO and US 16 CFR standards
- 2 Induction Heat Seal (IHS) Liner**
Seals the bottle and provides tamper evidence
- 3 ActiveGuard™**
Filled with desiccant or oxygen scavengers and placed firmly in the neck of the bottle
- 4 MonoBlock™ Bottle**
Blocks moisture 2 times better than industry standard HDPE bottles



IT'S ALL ABOUT THE Click

The most user friendly packaging solution for moisture sensitive formulations



Packaging Solutions

LOG's product portfolio includes 400 different standard and customized innovative packaging solutions developed to meet specific customer needs. Our packaging solutions meet the US FDA and European Pharmacopoeia requirements. A wide range of the packaging solutions are listed in LOG's Drug Master Files (DMF).

HDPE & LDPE Bottles

Solid & Powder Containers

- Standard volumes from 12ml to 1500ml
- Range of standard neck finishes from SP20 to SP53
- Matching screw and CR closures
- Pharma grade raw material



Liquid & Dropper Bottles

- Standard volumes from 10ml to 1000ml
- Range of standard neck finishes from 9mm to 38mm
- Matching closures and droppers
- Pharma and food grade raw material
- Rigid and LDPE squeezable bottles



PET Bottles

Solid Containers

- Standard volumes from 120ml to 250ml
- Range of standard neck finishes from SP38 to SP45
- Matching screw and CR closures
- Pharma and food grade raw material
- Variety of colors



Liquid Bottles

- Standard volumes from 30ml to 500ml
- Range of standard neck finishes from 18mm to 28mm
- Matching CR/TE closures
- Pharma and food grade raw material
- Variety of colors



Caps & Closures

Child Resistant (CR) Closures

LOG's child resistant (CR) screw closures are available in various sizes and guarantee a perfect match with LOG's extensive range of bottles. The entire CR closure family has a unique and distinctive design and pictogram that will make your product line stand out.

LOG's closures are offered with different type of liners that are approved for pharmaceutical use. The closures are CR-certified according to ISO 8317 & US 16 CFR § 1700.20 (Child Resistant Packaging).



Flip-Top Tube Closures

LOG offers flip-top closures that were specially developed to fit cosmetic cream tubes. The product family contains closures for several sizes of tubes and each closure is offered with different sized openings for various cream consistencies.

LOG's tube closures are extensively tested for resisting breakage due to repeated opening and closing. Additionally the closures are tested under water with air pressure to ensure that they provide a perfect seal when closed.

The closures "click" clearly when opened or closed, have a soft rounded design that is pleasant to touch and are available in a wide variety of colors.

Screw Closures

LOG's screw closures are available in the sizes of 33, 38, 45, 53mm and match perfectly with LOG's extensive range of bottles as well as with industry-standard containers. The closures can be provided with different types of liners that are approved for pharmaceutical use.

LOG's screw closure product family has a unique design and is available in a variety of colors, which enables customers to create a distinctive and uniform look for their product line.



LOG's child resistant (CR) closures have a unique design making your product stand out





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LOG's innovative packaging solutions provide you with the confidence that your product will be protected and delivered in the best possible condition.

Do you have any questions about our standard packaging portfolio or customized solutions?

Don't hesitate to contact us:



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