

# **CHILD-RESISTANT, SENIOR-FRIENDLY PHARMA PACKAGING**

**ALL YOU NEED TO KNOW ABOUT  
THE TECHNOLOGY USED IN OUR  
CR/SF PACKAGING**



**LET'S  
SAVE  
LIVES  
TODAY.**

# DO YOU REALIZE YOUR PRODUCTS CAN HARM CHILDREN?

Though we need pharmaceuticals to recover from illnesses, they can cause severe harm to healthy bodies. It is especially tragic when they get into the hands of children.

## Did you know that

- Certain heart and pain medications are so strong that **a single pill can kill a child**<sup>1</sup>?
- **One- to three-year-old boys**<sup>2</sup> are at the highest risk for poisoning?
- Every day in the USA, **165 children under five years**<sup>3</sup> are taken for emergency treatment due to accessing medicines?
- For every 10 cases of child poisoning, approximately **9 happen at home**<sup>4</sup>?
- **Only 3 out of 5 parents**<sup>5</sup> in the USA keep medicines out of the reach of children?

Each pharma company has a responsibility to ensure that children cannot access medicines that could harm them. Do you know, which of your products should be packed into child-resistant packaging?



1) Child Safety and Abuse Prevention Programs. Child Safety in the home. Parent's Guide to Child Safety. [http://www.keepyourchildsafe.org/child\\_safety\\_stats.html](http://www.keepyourchildsafe.org/child_safety_stats.html)

2) Remedy Health Media, LLC. Causes and Risk Factors for Poisoning. <http://www.healthcommunities.com/poisoning/causes.shtml>

3) Safe Kids Worldwide. Medication Safety Policy Brief. <https://www.safekids.org/medication-safety-policy-brief>

4) Safe Kids Worldwide. Medication Safety. <https://www.safekids.org/medication-safety-0>

5) Safe Kids Worldwide. Safe Storage, Safe Dosings, Safe Kids: A Report to the Nation on Safe Medication (March 2012). <https://www.safekids.org/research-report/safe-storage-safe-dosing-safe-kids-report-nation-safe-medication-march-2012>

# WHY CHOOSE CONSTANTIA FLEXIBLES?

Children are naturally curious, and we should not block them from exploring the world, we cannot influence the way they see the world, but we can protect them from accidentally harming themselves by packing medicines in packaging with elaborated opening mechanisms such as several step approach or simply strength.

Our in-house developed technologies cover a wide range of possibilities, e.g. specific and precise Constantia technology in the outside layer of laminates. They offer many different opening possibilities and are composed by a well-designed interaction of perfectly functional lidding material and the necessary tooling to produce child-resistant packages.

Our child-resistant / senior-friendly solutions are implementable across our whole product range. We have experienced innovators, who will be glad to work on an individual solution with you.

**CR tests are carried out by an independent institute in order to define the child resistancy level**

**Constantia Flexibles successfully completed CR/SF legal requirements**

**Depending on the product, different opening options are feasible**

**Tailored CR/SF solutions are possible**

**A team of experts can support you from the beginning until the end of the project**

**Perfect balance between safety and accessibility**

# TECHNOLOGY – CR/SF BLISTER LIDDING FOIL

In recent years, an increasing number of medicines have been protected with child-resistant (CR) packaging. Notwithstanding this market trend, elderly people also need to be able to open packaging easily (senior-friendly (SF) packaging). They sometimes have other people empty tablets from blister packs into a bowl if they cannot open the packaging themselves – which in turn poses a risk for children who live in the same household. As a result, one of the biggest challenges for medicine packaging is achieving the right balance between child safety and ease of access for elderly people. Constantia Flexibles meets these specific requirements with child-resistant / senior-friendly blister lidding foils.

Our child-resistant foils are available in five different versions: peel & push, peelable, bend & tear, US solution and push through. All five options provide comprehensive protection against moisture, oxygen and light, and can be customized to meet country-specific regulations. Constantia Flexibles is providing solutions for all the different markets (e.g. push through versions for Europe or peel & push, peelable mainly for the US market).

## **Peel & push**

To offer an extremely high level of safety, three steps are necessary to access the product. First, a blister cavity must be separated from the blister package by tearing along a perforation line. The laminate is then peeled off, revealing the aluminum foil. Finally, the product can be pushed through the remaining layer.

## **Peelable**

After separating one blister cavity from the blister package, the laminate can be peeled off. Along with the outstanding puncture resistance of the lidding foil, the steps described ensure child resistance.

## **Bend & tear**

After separating the cavity from the blister packaging, it can be opened by tearing along the perforated line. The mechanism is not complicated for a grown-up, but a kid has a hard time figuring it out.

## **Push through**

One-step access to pharmaceuticals requiring child resistance. Greater pressure is needed to press the product through the lidding foil, achieving a higher level of child resistance. This solution is therefore more suitable for hard products, as with the soft gel capsules, the product is often too fragile to be pushed through the lidding foil.

## **Child-resistant US solution**

We developed a special adhesive to increase the security of our peel & push application. This specific lidding must be moistened in water, before the peel can be removed. Through the complex opening mechanism this solution gives the best protection you can get on the market.

# TECHNOLOGY – CR/SF LAMINATES

Most of the laminates currently supplied to the healthcare market are paper based and will never be child resistant. By switching from Paper to PET, customer will no longer manage to open it unless a CR/SF opening device is added. Offering a broad variety of child-resistant packaging solutions, Constantia Flexibles is the market leader with two innovative opening-aid technologies that can also be designed as child-resistant versions: Laser Perforation and Tobepal Opening Feature (TOF) for laminates.

Both the Laser Perforation and the TOF technologies are in-house – and by developing a range of unique technologies and offering its customers an unparalleled choice of options for their child resistance needs, Constantia Flexibles holds a leading market position.



## Laser Perforation

The Laser Perforation opening feature is achieved by laser scoring the outer surface of the PET layer. By sufficiently weakening the laminate at a desired point, this allows the packaging to be easily opened in a linear direction. The design can be customized to meet customer requirements. To make this solution child-resistant, an additional step is added to the process. A stick pack, for instance, has to be squeezed first before it can be torn open. This procedure does not harm the aluminum layer of the stick pack because the aluminum reflects the laser and therefore remains undamaged.

## Tobepal Opening Feature

The Tobepal Opening Feature (TOF) gets its name from the Spanish operations of Constantia Flexibles. This design features TOF being applied in the PET layer of the laminate, achieved during the printing process using a propriety TOF technology cylinder prior to binding the laminate layers. TOF technology enables the CR/SF opening only in very specific areas of the pack. Such technology can be applied anywhere within current artworks. Once the TOF treated PET is laminated to the rest of the layers of the laminate, it may only tear in that very specific area. Barrier properties of any ALU based laminate will never be affected as only the external layer (PET) is perforated. Depending on the Constantia CR/SF solution, 1-step or 2-steps mechanism may be used to tear-open the pack (i.e. 2-step: squeeze and tear).

# CONCLUSION – IDEAL CR/SF PACKAGING FOR PHARMACEUTICALS

Delivering healthcare solutions to suit customer preferences and behaviors is no longer just an option. Today's patients are considerably more savvy. They are more likely to speak up when they feel a product is not living up to its potential and they are looking for alternatives that suit them best.

There are strong advantages in utilizing consumer and patient insights for developing products. Results of the study presented in previous sections can serve as a first step in consumer-centered product development. Depending on the product, additional tests can be conducted with the concepts or the actual packaging.

Technologies developed in-house by Constantia Flexibles cover a wide range of options. They offer many different opening mechanisms and are designed using the right functional laminate and lidding materials for the individual purpose and the necessary tooling to produce child-resistant packaging. Constantia Flexibles has already received valuable consumer feedback on each of the CR/SF products in its portfolio. We gladly share this feedback with our partners in the pharmaceutical industry when working on user-friendly protective packaging.

Depending on the required level of protection, delivery and dosage form – Constantia Flexibles offers the following products. In case you would like to know more, please visit [www.protect-the-kids.com](http://www.protect-the-kids.com) or get in touch with us at [pharma@cflex.com](mailto:pharma@cflex.com)



**PEELABLE**



**PEEL &  
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**CHILD-  
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US  
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**BEND &  
TEAR**



**PUSH  
THROUGH**



**CR/SF  
STICK  
PACK**



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STRIP  
PACK**



**CR/SF  
SACHET**



**CR/SF  
FLEXIBLE  
BLISTER**



**CR/SF  
FLOW  
WRAP**