

Current situation:

Every year, up to 200,000 domestic accidents involving poisoning in small children occur alone in Germany. About 15,000 of these children must receive medical treatment, not to mention the unknown number of lives such accidents claim every year. Whereas roughly 60 % of these accidents are caused by medical poisoning, about 40% involve household products such as cleaning agents (Source: IVM, Market Research Institute for the Packaging Industry). Poisoning in small children often has traumatic effects on both children and parents.

Children often mistake colored pills for sweets and trying them is particularly appealing. Forbidden things are tempting, especially when parents or grandparents regularly take their medicines in front of the children. According to medical ingredients, the absorption – even in small quantities – of substances initially supposed to heal may have devastating consequences on children.

Child safety is becoming, besides the protection of children through standards and regulations, a marketing argument. Parental awareness for child safety is growing with every situation in life. Existing child-proof packaging can also influence consumer choice while buying household products and medicines.

A dilemma and a challenge:

Reliable child-proof packaging has to combine two contradictory needs: safety against unauthorized access by children and user-friendliness, especially for senior citizens.

Child-resistant packaging is supposed to make drug access more difficult for children whereas senior-friendly packaging should facilitate the intake of medicines. This is why Faubel decided to examine and compare the traits, skills and abilities of both target groups. The differences between the two groups in terms of abilities were fairly obvious. Yet, addressing these in a single, practicable solution that complied with the requirements posed a particular challenge.

The Faubel-CRSF solution:

The Faubel-CRSF solution is a complex safety element which can be applied like a label on the top face of a blister package under certain conditions. With its material and structure, this solution makes the sensitive top face and the thin strip film saliva-proof, bite- and tear-resistant. This multi-layer solution can be custom-designed on three pages.

The adhesive used are certified food safe. Migration is no issue because the alufoil of the blister acts as a kind of barrier. The Faubel-CRSF solution can be adapted to the most varied blister shapes and sizes as well as to specific cavity properties. Three patents actually demonstrate how pioneering our solution is.



The safety concept:

The Faubel-CRSF labeling solution can be opened without extra tools. It consists of four different "obstacles" based on strength, dexterity, logical thinking (ability to read, to learn and interpret pictograms) and patience (owing to the complexity of this child-proof feature, children will struggle a long time trying to open the package, become frustrated and finally lose interest).

Adding a six-barrier protection

To break open this child-resistant solution featuring six barrier levels, you have to be either pretty clever or struggle a long time before getting to the medicine. Of course, any averagely talented person will manage to open this solution within seconds. The barriers can be partly overcome intuitively. Besides, the Faubel solution leaves enough room for additional content in case further details or explanations are needed. After one or two tries, the opening function can switch to an automatic operation as we know it from the push-and-turn-safety closures of cleaning agents, for example. Opening is not exactly a child's play, but straightforward enough to allow convenient access to the medicines required in everyday life.

CRSF Label – Safety in blister packages

CRSF: Child-resistant and senior-friendly

Safety is achieved via three mechanical and three logical barrier levels.

Mechanical barriers can be overcome with dexterity and/or strength. However, it can be assumed that children in the age group at risk (i.e. between 42 and 51 months in the draft standard) only possess limited fine motor skills and cannot use – or hardly – their physical strength in a systematic way. In contrast senior citizens (according to ISO 8317, healthy persons between 50 and 70 years of age) are very well capable of overcoming obstacles involving fine motor control and of using physical strength in a coordinated manner.

The next three levels of the Faubel-CRSF solution are based on logic and can only be overcome by reading and/or by interpreting pictograms, and with experience. Children in the test age group were neither able to read nor could they understand pictograms. Besides, prior experiences with the opening of tamper-proof or sealed products could not be assumed. Only senior citizens who were able to read could take part in the test. From experience, adults can decrypt pictograms. As a rule, experience and intuition are helpful when it comes to opening packages.

As of January 2010 it will be possible to manufacture first test samples for your blister packaging on a machine especially designed for that purpose.

How it works:

A short illustration

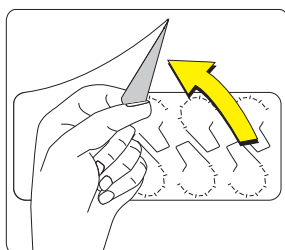


Fig. 1
First barrier level: A label layer where front and back can be custom-designed is being pulled up

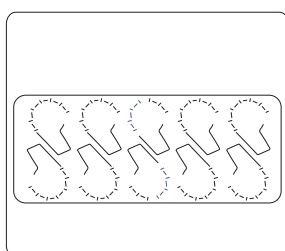


Fig. 2
The patented top face of the child-proof protection does not look easy to open at first...

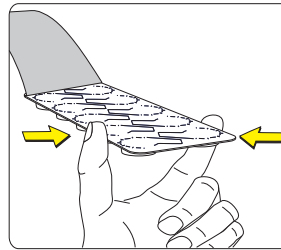


Fig. 3
... it's only by reading the pictograms that you'll find an easier way to proceed.

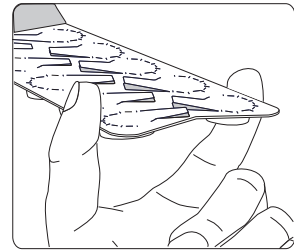


Fig. 4
After lifting the opening grip, the next obstacle appears. Pulling the grip straight up requires considerable strength.

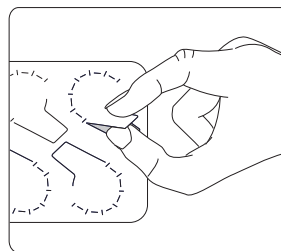


Fig. 5
Opening becomes easier by slightly twisting it to the right, as explained in the pictogram.

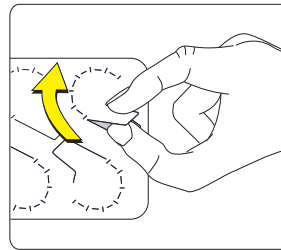


Fig. 6
After the first layer is peeled off, the push-through layer becomes visible. Simply pushing through is virtually impossible, even with considerable strength.

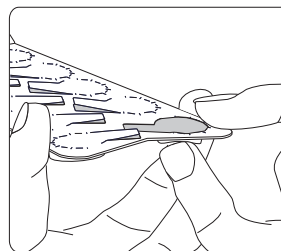


Fig. 7
Here again, a more convenient way to proceed is explained by texts or pictograms. Special pre-determined breaking points are provided for in the marked section (i.e. where "open" is). If the tablet is pressed against this particular spot, it can be fairly easily pushed through.

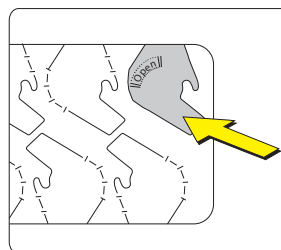


Fig. 8
With the last barrier level, the protective alufoil is torn through and the tablet can be removed.