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## **Alufoil Blister Packs: 50 years of solid service**

***The first blister pack was introduced to the market 50 years ago. Today it is hard to imagine a world where unit doses of solid form pharmaceuticals are not available in this user-friendly format. So many advantages for the end-user have emerged and its most obvious benefit is that it is always clear how many tablets have been used.***

However the first style of pack to incorporate a cavity and lid was designed for food containers not pharmaceuticals. It took a clear vision of its potential to create the blister packs we know today and to raise the bar on both form and functionality.

New materials and modern engineering has enabled this dynamic form of packaging to become an indispensable part of life; easy to carry; available in a wide range of shapes, sizes and formats; simple to print on and brand; and of course a very secure and protective pack!



But the birth of the blister was far from simple. Indeed it came about because of the need for birth control. When Schering (today Bayer) developed the first birth control pill it needed a pack to aid patient compliance and make it simple to control administered doses over a set time period. The solution came from Hassia, a leading manufacturer of packaging lines, in the early 1960s.

Blister packs had become possible thanks to the development of PVC and later copolymer, which had good thermoforming capabilities. However a vital component was the development of tempered alufoil, known as 'Springfolie', as a lidding material for the 'push through' pack, rigid enough, yet maintaining good adhesion by coating it with special lacquers.



The first machines were quite slow but quickly were able to produce over 400 blisters per minute. Modern machines can run at up to 1200 blisters per minute. Alufoil's tensile strength, high sealing integrity and excellent adhesion has enabled these speeds to be achieved. The new blister packs saved more than 60 per cent in materials compared with traditional packs, while flat packs were easier to store and took up less space. These features were initially recognised for cost savings, not sustainability issues, but certainly score highly today in that respect.

Two forms of blister packs for pills have evolved. The most common form is the combination of a plastic thermoformed sheet used to make the cavity and, for 'push-through' blisters, a sheet of 20µm rigid aluminium foil laminate providing the lidding layer



The next generation of blisters saw alufoil prove its exceptional value with the development of the coldform or alu/alu blister. No other flexible packaging material can match the all alufoil blister to protect against humidity and gases. So the coldform is ideal for sensitive products and provides a 'high value' image. A typical alu/alu blister uses 45µm foil laminate for the coldform blister layer and 20µm for the lid.



As regulatory and legislative requirements led to demands for greater security both the plastic and alufoil layers developed considerably. Demands for more child resistant blister packs led to new, stronger alufoil laminates being invented to make the format even safer. Combinations using both soft and hard alufoil from 30µm to 7µm, in combination with a paper laminate, attached to a thermoformed PVC between 250 and 300µm, have added considerably to blister security. In addition the packs can carry printed information on the alufoil lid to depict the dosing schedule or other important instructions.

Today's leading manufacturers of blister foil in Europe are Amcor Flexibles, Aluberg, Ariflex, Carcano Antonio, Constantia Flexibles and Hydro.

Accessibility and convenience for many types of pharmaceutical products has been achieved because of the blister. In 50 years the format has evolved into an indispensable packaging product and found new applications, even for its original use with foods, such as confectionery and chewing gum.

**Further information:**

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*The European Aluminium Foil Association is the international body representing companies engaged in the rolling and rewinding of alufoil and in the manufacture of alufoil containers and of all kind of flexible packaging. Its more than 100 members include companies in Western, Central and Eastern Europe.*