

50 years of blister packaging

Coldform blisters made entirely from alufoil

The next generation of blisters saw alufoil prove its exceptional value with the development of the coldform or alufoil blister, also known as FORMPACK. There is no plastic which 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 for the contents.

Development began at Aluisse in the early 1970s and, in conjunction with machinery manufacturers Hollinger & Karg (today part of Bosch Packaging), the coldform process and a suitable laminate were improved until Bayer adopted the blister for its new Aspirin with vitamin C product in effervescent form in 1974. A typical alufoil blister uses 45µm foil laminate for the coldform blister layer and 20µm for the lid.

This type of blister does require special handling requirements or specially modified forming stations to deal with the particular characteristics of the alufoil which needs to be formed carefully to avoid stress points which can result in pin holes.

Today new technologies have enabled even the most delicate and volatile substances to be protected against moisture, light, air and temperature while maintaining flavour or inert gas inside the cavity. A recently developed FORMPACK laminate en-

ables a desiccant to be incorporate on the seal layer to eliminate 'cross diffusion' of moisture through the seal. The Formpack® Desillex™ Plus, developed by Amcor Flexibles, recently won an Alufoil Trophy for this major advance in blister technology. //



Material development for blisters

The first blisters were formed from clear PVC to which the alufoil lid was adhered. Even today this type of format is still used for products such as medicated sweets – throat lozenges and cold remedies for clearing the head are typical examples.

But for reasons such as regulatory and legislative requirements, which led to demands for greater security, both the plastic and alufoil layers have been developed considerably over time. Indeed the advance in materials for other applications has often led the way in improvements to the blister pack in advance of the legislation.

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. A peel-push format utilises a paper/alu/PVC or a hard alu/PET/OPA laminate.

As PVC is susceptible to moisture ingress new alternatives have been created to combat this problem, such as PVC/PVDC combinations, multi-layer films, PET and PP. But the ultimate protection for sensitive products or those being taken to more humid regions of the world is the alufoil blister. //

The leading manufacturers of blister foil in Europe are:

- Amcor Flexibles
- Aluberg
- Ariflex
- Carcano Antonio
- Constantia Flexibles
- Hydro



It seems clear that the development and distribution reach of many pharmaceutical products has been achieved because of the blister. In 50 years the format has evolved into an indispensable packaging product. ///

INFLUENTIAL FACTORS ON PHARMACEUTICAL PRODUCTS

