

Child Resistant PTP “Child Proof”



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Child Proof (IPX exhibit)

【 1. Introduction 】

PTP (Press Through Packages) are one of the best forms of packaging for the distribution of pharmaceutical products such as tablets and capsules. This is because of the protection, discrimination, convenience, safety and costs that they offer. However, in Europe, America and the Republic of Korea, there is a substantial social system for the prevention of accidents and there is a legal obligation to use child resistant (hereinafter called “CR”) packaging for pharmaceuticals for clinical trials and for specified pharmaceutical products that are highly dangerous. Although there is still no legislation regarding this in Japan, it is thought that demand will increase from now on due to factors such as the increasingly aged society and the expansion of at-home terminal medical care..

【 2. Child Resistant PTP 】

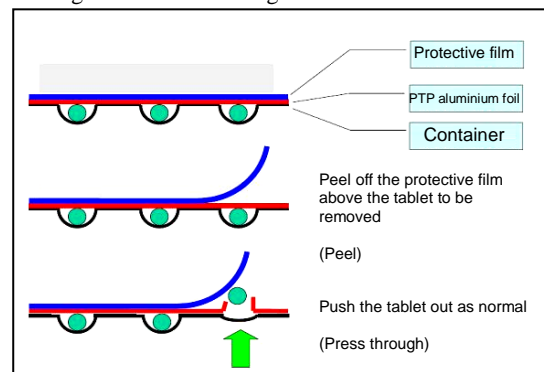
The general method for CR-PTP in Europe and America is the attachment of an adhesive seal on top of the lid material. In Japan however, there is a tendency not to use this method, due to reasons such as the avoidance of foreign matter inclusion and the productivity situation. Furthermore, the PTP blister machines within Japan are advanced in their high speed and compact sizing and there is little room to change them mechanically.

With these restrictions as a background, Toyo Aluminium has launched the “Child Proof” child resistant and senior friendly PTP, which uses structural methods to realize both the prevention of mischief by children and ease of use for senior people.

【 3. Packaging structure 】

A protective film is added to the outside of the lid material and this film is peeled off before the pharmaceutical product is pushed out. It is not possible to push out the product without peeling off the protective film. (Fig. 1)

Fig. 1 Schematic diagram of Child Proof PTP



【 4. Basic structure 】

(1) Pre-perforated type

On this type, the PTP is separated at the slit line to reveal the grip tabs and then the protective film is pulled off. (Photograph 1.) (Fig. 2)

Photograph 1 Pre-perforated type

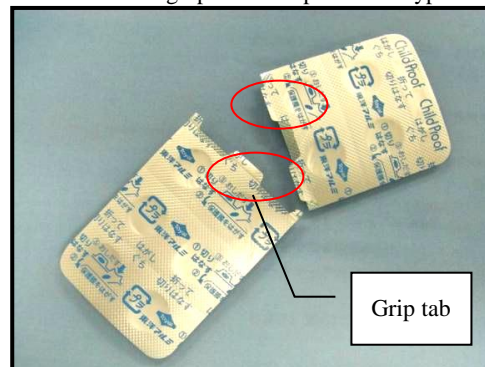
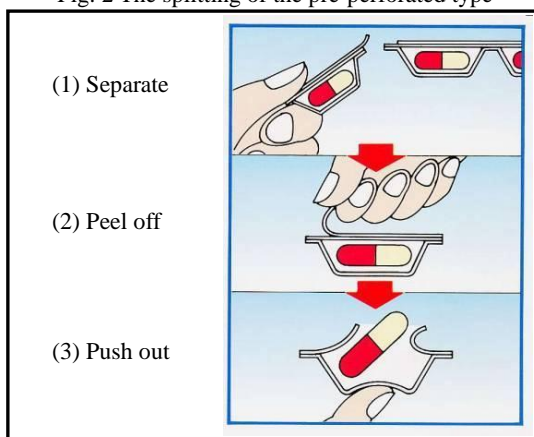
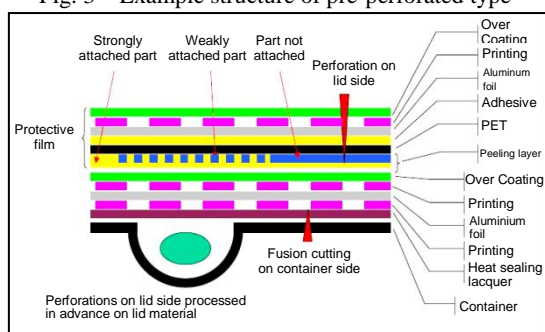


Fig. 2 The splitting of the pre-perforated type



The grip tabs can be made to appear at any desired position on the sheet by adding perforations in advance on the lid material. It is also possible to freely control the parts that have weak attachment. An example of the basic structure is shown in Figure 3.

Fig. 3 Example structure of pre-perforated type



(2) Pull-tab type

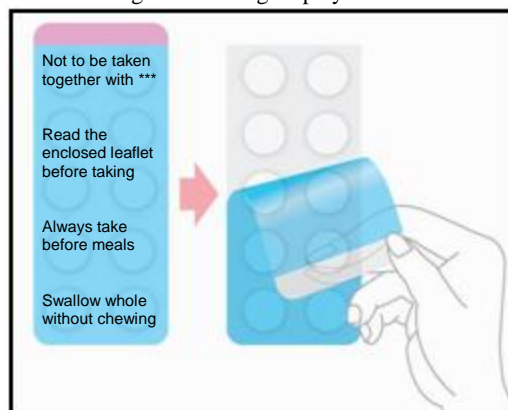
In this method, the tab part of the PTP is snapped off and the protective film is peeled off. (Photograph 2.)

Photograph 2 Pull-tab type



On this type of product, it is possible to print on the protective film, so there is a considerable increase in the space for displaying notes of caution, etc. It can also be expected that the film will be an effective function to prevent tampering when the products are displayed on shelves in stores. (Fig. 4)

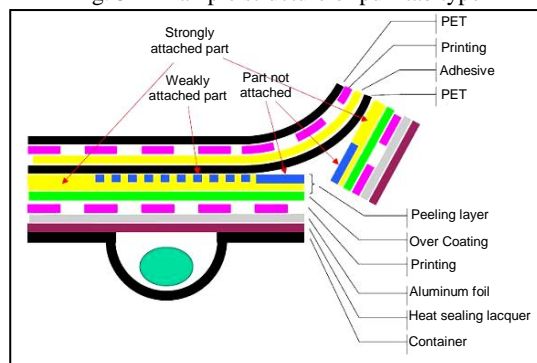
Fig. 4 Printing display function



As with the pre-perforated type, it is possible to freely control the peeling strength for the protective film.

An example of the basic structure is shown in Figure 5.

Fig. 5 Example structure of pull-tab type



【 5. Summary 】

The securing of safety in pharmaceutical product packaging is an important function from the point of view of accidental ingestion and medical malpractice. As society continues to advance and the market becomes more global, it is expected that the demands for improved safety on PTP packaging will become stricter and that the demand for CR-PTP will grow.

