

**Proven in industrial trials**

The WVTR results on flat, unformed film from our MOCON test at ICH conditions 40°C/75% r.h showed parity between our PERLALUX®-Tristar ultra and a 51my PCTFE. This result was very positive, but not sufficient by itself.

In addition, we wanted to prove as part of a customer trial that our film is equal under industrial conditions and in thermo-formed blisters.

The results clearly showed that the new PERLALUX®-Tristar ultra 250.25.120 film provides an even higher barrier than the PCTFE (51 my)/PVC laminate – both tested under exactly the same blister conditions.

**Market trend perfectly met**

Our new PERLALUX®-Tristar ultra film has received a lot of interest from customers, as it also offers attractive process cost savings. The large number of samples and first deliveries provide confirmation that we have an optimum answer to the market trend. ■

An innovation makes a breakthrough at a Brazilian pharma customer:

## PERLALUX®-Identity and «Helleva» – an anti-counterfeit alliance

For our customer Cristalia in Brazil, Perlen Converting develops an anti-counterfeit blister pack based on holographic elements.

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Josef Kothmeier, Manager Application Technology

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In 2007 Cristalia, the innovative Brazilian pharmaceutical company (see box), was in final market preparation for their proprietary product «Helleva» and implementing anti-counterfeiting protection by using our PERLALUX®-Identity film. With the launch of Helleva, a product to treat impotency, Cristalia demonstrated their pioneer spirit and capability again, by becoming the first company to fully develop in Brazil a product through vertical synthesis, from initial concept to clinical trials.

In order to underline the uniqueness and to protect the product against counterfeiting, the choice of a suitable packaging was of prime importance from the beginning. After successful consultation with our Brazilian representative, the decision was made in favour of PERLALUX®-Identity.

**Cristalia – a short profile**

The Brazilian Laboratorium Cristalia has set itself the following mission:

- To produce as many quality drugs at fair prices as possible
- Advancement of national research
- Continuous innovations aimed at helping to solve health problems.

The partnership with research institutes and other companies around the world is one of the key features in its 36 year history.

Cristalia has a very international focus and is active in Brazil and 40 other countries (Latin America, Middle East, Asia, Africa). In 2007 Cristalia was awarded Brazil's most innovative pharmaceutical company.

Tests of the galenic development by Cristalia showed that Helleva required a high protection level against moisture and oxygen for the whole shelf-life period. These preconditions are met by our high barrier film PERLALUX®-Starflex 120. All subsequent designs were based exclusively on the use of this film.

#### Blister layout for oblong tablets

The size, blister layout and folding box were defined by Cristalia's production and marketing departments. Using a standard blister size, packs of 1, 2 and 4 tablets were to be produced.

The successful arrangement and trouble-free thermoforming of the 1, 2 and 4 cavity packs were ensured by the correct tooling design and the running direction of the blister machine.

#### Holographic structures embedded in the film

The know-how and process technology to integrate the holographic structures in the base film is from us.

Based on Cristalia's layout, the security strips are positioned on the two longer sides of the blister, so that they are visible in the finished product and easily seen by the patient.

The design of the security elements requires a considerable amount of preliminary work. An attractive security feature with multiple levels can be created by carefully selecting from the countless design possibilities of overt and covert elements.

In a brainstorming session with our partner, Kurz GmbH, several proposals were worked out. Cristalia opted for a design, which combines a 2D and a 3D hologram. The main features of the design are the product name, the company logo and those subjects, which confirm the originality of a Cristalia product. The individual design components have been configured to create the impression of an continuous and seamless line.

#### Release in situ

An initial test run in Brazil confirmed that the layout calculations and the tooling design were correct and that Cristalia's skilled operators had no problems processing the film.

#### The launch

The launch of Helleva was supported by a promotion campaign from Cristalia. The blister pack design, with the security elements visible to the patient, played its role in the campaign by demonstrating that the producer is taking measures to increase the supply chain security of original drugs.

The deliveries of the Helleva product, with its original design, have confirmed that the concept of an anti-counterfeit blister pack solution using holographic elements has been well received by the patients. ■

