

Potent mixture

The Swiss packaging specialist Neopac is developing a glass-free primary packaging concept for parenterally used drugs. Harro Höfliger has been providing assistance with the process development since the test phase.

The Fleximed® tube is a transparent, flexible medical tube made of synthetic laminate offering significant advantages in comparison to conventional small glass bottles or ampoules. In addition to break resistance, ease of use and safety are among the most important features.

With Easymix, a product from the Fleximed® product family, Neopac goes even one step further. This two-chamber tube enables simple and safe preparation of mixtures for injections or infusions. The two chambers are separated from one another by a flexible barrier: A seam opens under pressure to the rear chamber, which enables mixing. With this method, two liquids as well as one liquid and one powder component can be mixed. At present, Neopac is in various clinical trial phases with several potential customers.

For the aseptic filling and sealing of the tubes, Neopac relies on the know-how of Harro Höfliger. "In our search for a potential partner, we were looking for technology leaders in the industry," says Ralf Künzi. Since 2011, Harro Höfliger has been a partner in the process devel-



opment of the Fleximed® product family. In the early phase of the collaboration, the company supplied a semi-automatic laboratory machine, which can fill the tubes with liquids as well as powders and is equipped with an integrated sealing tool.

Clever labeling

Labeling the Easymix tube created an especially major challenge. Regarding the basic requirements for label solutions, Ralf Künzi says: "You have to fit a lot of information on the label, which is required for regulatory purposes. Furthermore, the information must be permanently attached to the tube." Simply adhering the label was not an option due to the complex tube geometry. Here, the label experts from Schreiner MediPharm came into play.

"Accordingly, we had to find a labeling solution which does not limit the functionality of the Easymix tube. It is also imperative that the user has an unobstructed view of the content," Maximilian Jaeger explains the criteria. "This is why we developed a new label with a front and back part that surrounds the

More stability

Liquid active ingredients which are used in the field of parenteral medicine often do not remain stable for long. This is why they are stored in powder form and mixed with a solvent prior to application. The tube's multi-layer structure offers the necessary high barrier protection against water vapor and oxygen. At this year's Interpack in Düsseldorf, the first labeled Fleximed® Easymix Tube was presented to the trade professionals – another milestone on the road to market launch.



"Harro Höfliger is the clear leader in specialty machine engineering for parenteral packaging."



Ralf Künzi, Business Development Manager Medical, Neopac

"We often seek new ways which break with established approaches."



Maximilian Jaeger, Product- and Process Manager, Schreiner MediPharm

tube like a bag. The experts from Harro Höfliger have also made it possible to apply this tube bag with a machine. As machine manufacturers, they have been able to add a different perspective with regard to processes," continues Jaeger. In general, Ralf Künzi sees great market potential for the Fleximed® tubes: "We are certain that in the next few years we can win several customer projects,

each of which will have different requirements that demand customized developments." For Künzi it is important that he can rely on the partners who have already been involved in the development of the product, "because we have gone through common learning processes and now have shared knowledge. Together with the two project partners, we have an extremely potent mix of innovative strength." ■

About Neopac and Schreiner MediPharm

Neopac with headquarters in Oberdiessbach (Switzerland) was founded in 1906 and has been producing synthetic tubes since 1954. Neopac is part of the Hoffmann Neopac AG, an independent family-owned enterprise based in Thun (Switzerland), specializing in the development and production of tubes for the safeguarding of healthcare products. The annual production output is more than 600 million tubes.

Schreiner MediPharm with headquarters in Oberschleißheim near Munich is a leading developer and manufacturer of innovative, multi-functional special labels and labeling solutions for the pharmaceutical industry and medical technology. Thanks to the enterprise's special know-how, Schreiner MediPharm has made a name for itself as a powerful development partner and reliable quality supplier for leading pharmaceutical companies.