

CASE STUDY

Collaborating with Rommellag on the next-generation Blow Fill Seal (BFS) packaging



DOW™ HEALTH+™ Polymers for Rommellag's bottelpack® technology, bringing squeezability in ampoules and supporting sterilization temperatures up to 112°C in IV bottles

The context

Blow-Fill-Seal (BFS) technology is an advanced aseptic manufacturing technology in which plastic containers are formed, filled, and sealed in a continuous automated process. By reducing human intervention during container formation, filling, and sealing, BFS helps lower contamination risk and supports product integrity. It is widely used for sterile, single-dose and multi-dose pharmaceutical products, including vials, ampoules, and bottles for inhalation, ophthalmic, and parenteral applications.

The challenge

The BFS industry is expanding rapidly, but so are expectations. Manufacturers and healthcare brands demand **higher clarity, lower extractable profiles, and robust supply security**. Low-density polyethylene (LDPE) is valued for its moldability, clarity and design flexibility.

Nonetheless, the ability to withstand **higher sterilization temperatures** is critical for applications that require steam sterilization to allow for **shorter cycle times** and significantly improved production rates.

Another important aspect is the **squeezability** of ampoules for mono-doses such as eye drops. This feature helps ensure that people with either strong or limited grip strength can effectively use the ampoules, leaving almost no content residue behind.

At the same time, packaging lines need materials that offer **good processability, a broad operational window, exceptional reliability, and pharmaceutical compliance**.

Our answer

Addressing the evolving needs of pharmaceutical packaging means working with BFS equipment manufacturer, **Rommellag**. Dow has designed a polymer with the needs of not only the healthcare industry in mind, but also of manufacturing.

DOW™ LDPE 93004 HEALTH+™ Resin brings the transparency of an LDPE in a grade suitable for sterilization temperatures of up to 112°C, opening the door for shorter cycle times.

DOW™ LDPE 91015 HEALTH+™ Resin is designed for the squeezability needed in single-use ampoules, helping patients control their dosage.

These grades have gone through validation at Rommellag's bottelpack® lines, demonstrating processability and performance alike. Moreover, each HEALTH+™ grade is backed by exceptional lot-to-lot consistency, a two year security of supply, and certification according to selected regulatory requirements. HEALTH+™ Polymers from Dow address quality and consistency standards for pharmaceutical applications, and are specially designed and FDA-approved to help our customers check all the boxes.

bottelpack®

Health+
polymers



Up to 50% lower extractable levels compared to incumbent offerings



Clarity / Transparency



Exceptional demoldability and scrap separation



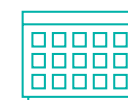
Excellent performance and processability



Broad operational window



Exceptional lot-to-lot consistency and quality



Two-year security of supply



Compliant with USP Class VI, USP <661.1>, and EU Pharmacopoeia standards*

* Each specific DOW™ HEALTH+™ Polymer may comply with different regulatory requirements. Please refer to Dow's Regulatory Data Sheet for the latest regulatory status of Dow products, or contact your Dow representative for further information.

Better together

The collaboration between Dow and Rommelag – a global leader in BFS equipment – validates the robust polymer processing, optical appearance and overall performance of DOW™ HEALTH+™ Polymers portfolio on standard Rommelag machines.

Along with other BFS polymers from Dow that have gone through testing in the bottelpack® line, **DOW™ LDPE 93004 HEALTH+™** and **DOW™ LDPE 91015 HEALTH+™ Resins** have demonstrated excellent runnability, supporting high-speed, high-quality BFS production on Rommelag equipment, while helping ensure regulatory compliance with stringent pharmaceutical standards, contributing to overall patient safety.

“As a pioneer in aseptic liquid packaging equipment, we are constantly looking for the right technologies to support the needs of our customers in the pharmaceutical industry.”

“Dow brings the polymer technologies, especially with their broad LDPE portfolio, that combine transparency of the resins and processability in our BFS machines for ampoules and IV bottles. Their HEALTH+™ Polymers have shown positive testing outcomes at our machines, thus leading us to include them in our list of recommended materials for use with our bottelpack® lines.”

Martin Groh,
R&D Polymer Engineer



What's next?

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