



Starlinger

# Press Release

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## Two Worlds Unite – Woven Fabric Meets FFS

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**woven\*FFS – a symbiosis of raw material, packaging material and filling machine development**

*On the one hand, there is the FFS filling concept for bulk commodities. On the other, there is woven tape fabric as a packaging material. Both offer important advantages in their respective fields of use. To combine these advantages and to make something happen that up to now seemed impossible, poses a unique challenge – and a compelling reason for Dow, Starlinger and Haver & Boecker, three companies known for developing innovative high-end products, to form an active cooperation and take a step into the future.*

### **FFS technology and woven tape fabric: Two winning concepts**

The FFS (Form, Fill and Seal) technology is a fully automatic low cost packaging method for powders, resins, flakes and many other free-flowing goods. The concept: On the filling machine, a roll of tubular plastic material is formed into bags, which immediately are filled with the product and then sealed shut. The sealing jaws simultaneously weld the top of the just filled bag and the bottom of the following bag. Due to the advantages of the FFS system for the value chain, FFS bags hold by far the biggest market share – 63 % – of all plastic heavy duty shipping bags in Western Europe today (open mouth bags 30 %, valve bags 7 %).

Woven tape fabric is a packaging material made from stretched and woven plastic tapes. Since its introduction as a packaging material, tape fabric has come a long way. Formerly, woven tapes were only used for industrial packaging such as FIBCs or AD\*STAR® cement bags; nowadays, however, coated tape fabric is the material of choice for high-gloss printed consumer packaging and carrier bags found in department stores and supermarkets all around the world.

### **A breakthrough innovation**

Until now, processing woven fabric on FFS packaging lines was not possible. Based on a wide range of expertise and a mutual desire to optimize existing possibilities and capture new markets, Dow, Starlinger and Haver & Boecker endeavoured to combine the advantages of the two successful concepts.

For the first time it is now possible to process woven tape fabric, produced on Starlinger machinery using Dow resin, on Haver & Boecker FFS packaging lines. The innovation is aimed especially at filling companies in the chemical processing industries, as well as in the building materials and food industries. The “woven\*FFS” technology provides a welcome opportunity to cut down energy and raw material consumption as well as costs in the bulk material packaging process.

### **Why combine woven tape fabric and FFS?**

Because if joined, their individual advantages can help to solve some of the most persistent problems in secure and cost-effective packaging. Bags made of woven tape fabric are resistant to dropping, squeezing and bending, and even when handled with a hook or damaged on a nail, they do not rip open and spill their valuable contents. Furthermore, woven tape fabric is very thin compared to currently used films, making it lightweight but durable and resulting in reduced material consumption. And in addition to that, it is fully recyclable; thus, also the environment benefits from this new type of packaging.

The great advantage of the FFS method is that it uses a sealing process for closing the bags – FFS machines neither require needles, which are prone to breaking, nor sewing thread, which has to be constantly replenished. Thus, there is no contamination of the filling material with thread ends, and the bags are hermetically sealed because there are no stitching holes.

### **The advantages of woven\*FFS bags**

- Strong but lightweight packaging material
- Protection of the packaged goods by an all-around closed, water-impermeable type of packaging
- Operator time is reduced to roll and format changes since Haver & Boecker FFS machines are fully automated
- Optimised bags: Bulk density is constantly monitored and the bag length adjusted accordingly
- Higher load security due to tight bag shape and clean bag surfaces
- Less raw material which, at the bottom line, saves resources and money

### **From PE film to woven fabric – a beneficial change**

During the extensive development work that was needed to accomplish the set goals, Dow, Starlinger and Haver & Boecker paid special attention to make the shift from PE film to woven tape fabric as easy as possible for fillers. In other words, customers with existing Haver & Boecker FFS lines do not have to undertake any major conversions. All it takes to make use of the benefits of woven tape fabric are slight modifications to the FFS system – and simply use another type of tube roll.

Also companies, which until now were not able to use FFS filling machines because they have been processing woven fabric due to customer and market requirements, are able to benefit from this fully automatic, low cost packaging concept. The investment for a new system is offset easily by the high production capacity and the reduction of operator and maintenance time/costs that these machines offer.

### **K trade show 2010**

The new packaging concept will be shown for the first time at the K 2010 exhibition in Düsseldorf from October 27<sup>th</sup> to November 3<sup>rd</sup>, 2010. A joint press conference, where the three companies will present “woven\*FFS”, will be held on October 29<sup>th</sup>, 2010, at the Messe Düsseldorf press conference facilities, room 02, CCD Süd, at 4:30 pm.

### **About the companies**

**Dow** is always ahead of market requirements and develops their products with a vision to deliver improved solutions to final end users and plastic converters. For “woven\*FFS”, Dow resins meet the requirements necessary for a demanding FFS application, facilitating easy processability on conventional FFS lines.

For more information please contact: Ms. Karin Katzer, Market Manager Dow Europe GmbH

**Visit Dow at the K2010 in Düsseldorf in hall 08A, K48**

[www.dow.com](http://www.dow.com)

**Haver & Boecker OHG**, a global technology leader and solution provider for packaging equipment, has been up for the challenge to develop innovative cutting edge technology. To the woven\*FFS project, they contributed their long-term experience in handling and sealing tubular FFS bags.

For more information please contact: Mr. Michael Vennebusch, Manager Business Unit Chemie Haver & Boecker

**Visit HAVER & BOECKER at the K2010 in Düsseldorf in hall 12, booth A32**

[www.haverboecker.com](http://www.haverboecker.com)

**Starlinger & Co. Ges.m.b.H.** is best known as the world's leading technology supplier for the production of flexible woven packaging made of stretched plastic tapes. Their technological know-how and expertise on tape extrusion, weaving and coating provided valuable input for the development of woven tape fabric suitable for FFS applications.

For more information please contact: Mr. Bernd Hartmann, Product Manager Starlinger & Co GmbH

**Visit Starlinger at the K2010 in Düsseldorf in hall 16, booth B47**

[www.starlinger.com](http://www.starlinger.com)