

PRESS RELEASE

GEA is a development partner for 100 percent recyclable plastic packaging

Consortium with plastics manufacturer Borealis/Borouge develops The Full PE Laminate solution based on Borstar® Bimodal polyethylene – GEA adds machine building expertise

Düsseldorf (Germany), May 4, 2017 – In April 2017, “The Full PE Laminate” received the GPCA Plastics Excellence Awards “Best Sustainability Initiative in the plastics conversion industry” which was held as part of the GPCA Plastics Conversion Conference (PlastiCon 2017) in Abu Dhabi. A consortium that included GEA had introduced this ground-breaking solution for the manufacturing, processing and recycling of flexible plastic packaging, which is a matter of growing importance for the packaging industry in October 2016. To achieve this, plastics supplier Borealis brought together the most advanced companies along the value chain: from processing the polyethylene (PE)-based raw material, to producing the films, to gravure printing and laminating, to packaging all the way to recycling.

The goal was to change the materials, which up until this point had only limited recyclability, in such a way that any packaging they were used to make could be returned completely to the materials cycle – without a loss of performance in either their use or the packaging process. As a technological leader in food processing and packaging, GEA contributed machine building and processing expertise.

Flexible packaging: fully recyclable only with The Full PE Laminate

Flexible plastic packaging in the form of stand-up bags, films, sacks, bags or wraps is one of the fastest growing segments of the packaging industry. This type of packaging is especially popular because it ensures the quality and safety of consumer and industrial products, but also fulfills consumer demand for greater functionality and convenience. Its greatest drawback: up until now, the recyclability of these plastics has been limited because in order to achieve the necessary degree of flexibility, they are usually made up of a number of different materials. Recyclates made from these types of multimaterial film solutions can only be used for applications with lower quality requirements.

With The Full PE Laminate, Borealis and Borouge have now developed an innovative monomaterial solution based on Borstar® Bimodal polyethylene, which makes it possible for PE packaging materials to have a second life as valuable end products. The production-related advantages are also persuasive: The Full PE Laminate is just as stiff, tough and puncture resistant as conventional materials, it can be made into high-quality films. These films are easy to print and laminate and can also be used for demanding packaging applications such as stand-up bags.

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The Full PE Laminate tested on GEA SmartPacker

The test was carried out by GEA experts in Weert, The Netherlands, who were entrusted with the task of adapting the packaging equipment [GEA SmartPacker](#) CX400 Quatro Seal for use with the new film material. They tested The Full PE Laminate on the vertical form fill and seal (VFFS) flowpacker and adapted it to achieve an optimum film run.

Jacques Timmermans, the product application specialist at GEA who was in charge of the project, said, “We managed to adjust our pack line for the flexible PE film so that we can now work in continuous mode without a loss of efficiency or quality.”

Improved environmental balance sheet when compared with conventional flex pack solutions

As the newly developed solution uses even less energy from production to finished packaging product than conventional plastics, this further improves its environmental balance sheet. This was confirmed by a life cycle assessment of the innovation along the value chain that was commissioned by Borealis.

“Assuming a recycling rate of 50 percent, flexible packaging based on The Full PE Laminate can further reduce the carbon footprint by another 15 percent as compared to a film solution which is not recyclable or only recyclable into low quality recycling products,” Anton Wolfsberger, Head of Marketing for Consumer Products and Pipe at Borealis, summed up.

Jacques Timmermans added, “We at GEA work each day to improve the sustainability of our custom-built solutions: greater conservation of resources, more compact, longer lasting, and easier to use. The Full PE Laminate project is an excellent example of how we can reduce the life cycle costs of plastics by working together with the best in the industry.”



Fig. 1: [The development of The Full PE Laminate solution was a successful joint project carried out by Borealis and a consortium of partners along the plastics value chain.](#) © Borealis

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Fig. 2: [GEA tested The Full PE Laminate on the vertical form fill and seal \(VFFS\) flowpacker GEA SmartPacker CX400 Quatro Seal.](#)

Further information available at gea.com: [GEA SmartPacker](#)

For information about the award for “The Full PE Laminate” (Borouge/Borealis/Unilever): [GPCA Plastics Excellence Awards](#)

Further information on the product and consortium available at: <http://www.borealisgroup.com>

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About GEA

GEA is one of the largest suppliers for the food processing industry and a wide range of other industries that generated consolidated revenues of approximately EUR 4.5 billion in 2016. The international technology group focuses on process technology and components for sophisticated production processes in various end-user markets. The group generates around 70 percent of its revenue in the food and beverages sector that enjoys long-term sustainable growth. As of December 31, 2016, the company employed about 17,000 people worldwide. GEA is a market and technology leader in its business areas. The company is listed on the German MDAX (G1A, WKN 660 200). In addition, GEA's share is a constituent of the MSCI Global Sustainability Indexes. Further information is available on the Internet at gea.com.

About Borealis and Borouge

Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. With its head office in Vienna, Austria, the company currently has around 6,600 employees and operates in over 120 countries. Borealis generated EUR 7.2 billion in sales revenue and a net profit of EUR 1,107 million in 2016. Borouge is a joint venture of Borealis and the Abu Dhabi National Oil Company.

www.boealisgroup.com

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