

## Coca-Cola Invests in World's Largest Plant-based Packaging Facility

Source: Bioplastic innovation

Posted: Nov 10, 2012



Coca-Cola Company is ramping up production of its plant-based packaging in its bid to bring lower-carbon plastics to the marketplace. The brand leader has struck a deal with JBF Industries to expand manufacture of its PlantBottle material first launched in 2009. Since then, over 10 billion packages of PlantBottle have been distributed across 24 countries – saving an equivalent of more than 200,000 barrels of oil.

As part of the agreement, JBF Industries will build the world's largest facility to produce bioglycol, the key ingredient used to make PlantBottle packaging. The plant will be located in Sao Paulo, Brazil, and will utilise locally sourced sugarcane and sugarcane processing waste in the manufacturing process. Construction on the new facility is expected to begin at the end of this year and will last for 24 months. At full capacity, it is estimated it will produce 500,000 metric tonnes of material per year.

Coca-Cola has set itself a target of using Plantbottle packaging technology in all of its plastic bottles by 2020. According to the company, the new facility will remove the equivalent of 690,000 metric tonnes of carbon dioxide each year. Coca-Cola's vice president & chief procurement officer Ronald Lewis said that the benefits of sustainable innovation are only fully realised when commercialised and put in the hands of consumers.

"Coca-Cola has sold more than 10 billion PlantBottle packages around the world that are less dependent on petroleum and have a lower carbon impact. We are pleased that our partnership with JBF Industries will help us further expand global production."

## Nike Uses Bio-based Polyurethanes

Source: Green Chemicals

Posted: Nov 9, 2012

Nike's announcement of its GS football boot when it announced that its new football boot has been worn by Brazilian football star Neymar. Back then, Nike said the sole plate of this boot is made of 50% Pebax Renew (Arkema's castor-based thermoplastic elastomer with about 97% renewable-based component), and 50% bio-based thermoplastic polyurethanes (TPU).

Spain-based Merquinsa, a Lubrizol company, actually noted on a press release last month that it was their Pearlthane ECO TPU product (also made with castor oil derivatives) that Nike used on the plate base of the GS Football boot. The castor-based TPU made the sole plate 15% lighter than traditional plate composition, according to Merquinsa.

Nike released in August at select retailers the GS Football Boot (worth \$300!!). Nike is said to have only 2,012 pairs of these shoes. Nike also noted that the shoe's heel counter is made with Pebax Renu with at least 77% castor derivatives (by weight?), while the tongue and quarter (I have no idea where these parts of the shoes are...) are said to be constructed from recycled polyester made from 95% recycled plastic bottles.

Last month, the blog posted about well-known sports footwear brand PUMA announcing its worldwide launch of shoes, apparel and accessories that will use either biodegradable or recyclable plastics.



## PolyOne Launches 99% BioBased reFlex™ 300 Bioplasticizer for Healthcare Applications & More

Source: SpecialChem

Posted: Nov 9, 2012

At the recently held European Bioplastics Conference, PolyOne Corporation [NYSE:POL] introduced reFlex™ 300 bioplasticizer, the latest addition to the Company's industry-leading family of Sustainable Solutions. Derived from rapidly renewable feedstocks and certified to contain 99 percent bio-based content, this non-phthalate alternative provides a one-for-one replacement for general-purpose plasticizers used in flexible vinyl formulations. This new material was developed to help customers meet their sustainability goals with a non-phthalate, bio-derived solution.

"We continue to see increased marketplace demand for renewable technology for plasticizers," said Rob Rosenau, President, PolyOne Performance Products and Solutions. "Our reFlex 300 bioplasticizer enables customers to expand their offerings with differentiated alternatives that heed consumer calls for eco-conscious solutions."

PolyOne reFlex 300 bioplasticizer can help customers reduce their carbon footprint and eliminate phthalates without compromising in-service performance. Further, this new technology assists manufacturers and brand owners in satisfying the requirements of the Consumer Product Safety Improvement Act (CPSIA), which bans certain phthalates in products used by children.

Certified under the USDA BioPreferred® program to be 99 percent biobased, reFlex 300 bioplasticizer can enable users to explore certification of their own products to this standard, potentially resulting in preferential procurement status with the United States Federal Government.

Flexible vinyl markets and applications that can benefit from reFlex 300 bioplasticizer include:

- Healthcare - tubing and connectors
- Electrical components - plugs and insulators
- Building and construction products - weather stripping, gaskets, office furniture, and flooring
- Consumer goods - toys and shoes



PolyOne reFlex™ 300 bioplasticizer is the second technology to be commercialized as a result of a development alliance between PolyOne and Archer Daniels Midland Company (ADM). In April of this year, PolyOne introduced fast-fusing reFlex™ 100 bioplasticizer.

## Faurecia, Mitsubishi to Produce Automotive Bioplastics

Source: Plastics News

Posted: Nov 8, 2012

Automotive supplier Faurecia SA has signed an exclusive agreement with Mitsubishi Chemical Corp. to co-develop bioplastics designed for mass-production for use in automotive interiors. Faurecia's Nov.8 announcement said it plans to develop a full range of bioplastics, which it expects to see boom in the period 2015 to 2020. The seating and interiors producer has been researching bioplastics derived from 100 percent natural materials since 2006 (BioMat project).



Nanterre-based Faurecia also said the environmental constraints associated with vehicle weight reduction, and the regulations intended to increase the recyclability of materials used in the vehicles to 85 percent in Europe by 2015 call for increased use of materials from natural resources, which it also claims "will ultimately replace petroleum-based plastics." This initiative also aims to ensure that the materials used have a positive impact on the product lifecycle (from initial extraction through to end-of-life).

Essentially, the objective of the joint Faurecia-Mitsubishi Chemical program is to develop a polymer that can be used in mass-production for automotive interior parts, including door panel trim strip, structural instrument panel and console inserts, air ducts, door panel inserts and more. The work will start by modifying Mitsubishi Chemical's patented biomass-derived poly-butylene succinate (PBS) with the ultimate target of producing this from 100 percent bio sources.

Minneapolis-based BioAmber Inc. will supply bio-based succinic acid to the partnership. Faurecia will have exclusive rights to automotive applications of the specific polymers jointly developed under this project. This company said this project builds on several years of development work with BioAmber, a specialist in bio-based succinic acid technology.

The agreement with Mitsubishi Chemical "will make Faurecia the first automotive equipment supplier to mass-produce a 100 percent bio-based plastic. We are confident about the future of this technology as a substitute for petroleum-based plastic components; indeed, it is one of the main thrusts of our strategic initiative 'bio-attitude'," said Nicolas Pechnyk, vice president engineering for Faurecia Interior Systems, in the company statement.

For Mitsubishi Chemical, Shigeru Handa, general manager of sustainable resources business development department, said: "We believe our strengths in biotechnology, polymer development, and patent position will contribute to this partnership with Faurecia." Faurecia said the agreement will enable three leaders to pool their strengths: Faurecia, no. 1 worldwide in automotive interiors, Mitsubishi Chemical, one of the world's largest chemical groups, and BioAmber, a pioneer in making bio-based succinic acid.

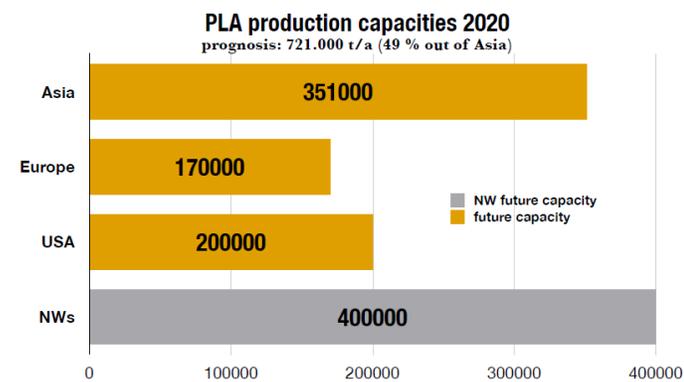


## Asia to Top PLA Capacity by 2020

Source: Plastics News

Posted: Oct 23, 2012

Asia will have the largest capacity for bio-based PLA resins by 2020, surpassing North America, as plentiful feedstocks from agriculture and strong government incentive programs help push development there, according to a new analysis. Worldwide PLA capacity is estimated to rise from 182,000 tonnes a year in 2011 to 721,000 tonnes in 2020, with Asian capacity projected to be just under half, with more than 350,000 tonnes, according to research from Thailand's National Innovation Agency and the Hürth, Germany-based Nova Institute, presented at a recent conference in Thailand.



North America currently dominates PLA production, accounting for two-thirds of global capacity with over 120,000 tonnes, and that's projected to grow to about 200,000 tonnes by 2020. The incentives, the packages from the governments that have been set in place, is one part of [why Asian capacity will grow rapidly," said Wolfgang Baltus, the senior project advisor for the Bangkok-based NIA, noting that Indonesia, Malaysia, Thailand and other countries in the region have government support for bio-based materials of all sorts.

The Asian domestic market demand for PLA remains weak, and that could mean that much of the added PLA production capacity in Asia will be exported. Thailand is hoping to become a bioplastics hub. The country's largest plastics maker PTT Chemical Public, for example, last year bought a 50% of major American PLA maker Natureworks, and the Thai government in 2008 began committing substantial research funding to bioplastics. Natureworks currently makes 85% of the world's PLA, and even with global expansions by others, will still likely have more than 50% of global capacity by 2020.

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The research also showed that Chinese PLA resin production volumes "collapsed" between 2007 and 2011, as companies there had problems with the quality of their lactic acid, a key building block of PLA, Baltus said. Chinese exports of PLA dropped from 4,400 tonnes in 2007 to 237 tonnes in 2009, and remained at those low levels in 2010 and 2011. That has boosted Chinese imports of PLA from about 1,200 tonnes in 2007 to 4,000 tonnes last year, he said.