Metabolix Grants PLA-related Patent License to NatureWorks

Source: Plastics News

Posted: 14 March 2012

In a deal between two bioplastics leaders, Metabolix Inc, has licensed a patent covering bio-based PLA resin to NatureWorks LLC.

The patent -- known as the 199 patent -- covers production of PLA blended with polybutylene succinic polymers and similar materials, officials with Cambridge, Mass.-based Metabolix said in a March 14 news release."This research greatly expands the uses of PLA in biodegradable plastics, becuase the blends allow for a stronger, more flexible form," inventor and patent-holder Stephen Mccarthy said in the release.

NatureWorks is based in Minnetonka, Minn., and operates a commercial-scale PLA plant in Blair, Neb. The plant ranks as the world's largest bioplastics facility. NatureWorks is a joint venture between agricultural giant Cargill Inc. and plastics and chemicals maker PTT Chemical Public Co. Ltd. Of Thailand. Metabolix last year started commercial production of bio-based PHA resin at a plant in Clinton, Iowa. But the firm suffered a blow earlier this year when agricultural giant Archer Daniels Midland pulled out of a commercial alliance between the two firms, citing insufficient results. Metabolix has struggled financially, losing almost $40 million in 2011 on revenue of less than $1.5 million. Almost two-thirds of the firm's 2011 revenue came from grants. On Wall Street, Metabolix's per-share stock price was above $10 in early 2011 but had declined to about $3.20 in late trading March 14.

Resin Purac Starts Thai Lactide Plant

Source: ICIS Green Chemicals

Posted: 28 February 2012

The Netherlands-based Purac sent to the blog this press release today stating the successful start-up of its new 75,000 tonnes/year lactide plant in Thailand, which started construction in March 2010. According to the company several batches of PURALACT lactides have already been produced and actual deliveries to customers are scheduled to start early 2012. For those who are new in the bioplastic business, lactides are precursor for polylactic acid (PLA) resins but it can also be used as a building block for intermediate chemicals.Purac said the EUR45m plant will produce lactide monomers for biobased resins and plastics, which will be supplied to Purac business partners in the polymer and chemical industry.

"The PLA polymers made from the PURALACT® L and PURALACT® D monomers aim at gaining a significant share of today's plastics market and enables Purac's partners to produce PLA with application temperatures up to 180 °C (266 °F)."In the packaging arena, a product formulation was developed by Purac and its partners based on blends of PLA homo-polymer resins i.e. PURALACT® based PLLA and PDLA. This blend was extruded into a sheet material and subsequently thermoformed on an industrial production line for applications such as hot food trays.

The blog recalls some of its partners such as Indorama Ventures PLC and Arkema although the blog is not sure if BASF is a partner only on Purac's succinic acid project or if BASF also has interests in Purac's PLA -- given that BASF's Ecovio plastic is made from a blend of the company's petroleum-based biodegradable resin Ecoflex PBAT (polybutyrate-adipate-terephthalate) and starch-based PLA.

Natureworks and BioAmber form Bioplastics JV

Source: European Plastics News
Posted: 20 February 2012

AmberWorks, a new joint venture between polylactic acid maker NatureWorks and biochemicals company BioAmber, is developing new compounds that will greatly expand the property range of bioplastics, a NatureWorks official said. BioAmber produces bio-based succinic acid, a feedstock for bio-based modified polybutylene succinic polymers (mPBS). The companies are targeting biodegradable food service products such as injection moulded cutlery and thermoformed cups, lids and clamshell containers, said Steve Davies, NatureWorks director of marketing and public affairs. NatureWorks, based in the US, makes Ingeo-brand PLA.

AmberWorks now has samples of the first two grades for development by customers: Ingeo AW 200 D for thermoforming and Ingeo AW 300 D for injection moulding. The material is approved for food contact by the US Food and Drug Administration, Davies said. “We want to get them out to the market,” he said. Montreal-based BioAmber currently makes bio-succinic acid at an industrial fermenting plant in Pomacle, France. BioAmber plans to build a plant in Ontario, Canada, under a partnership with Mitsui.That plant, set to open in 2013, will make bio-succinic acid as well as 1,4 butanediol (BDO), the two building blocks to manufacture mPBS. The joint venture will use commercially available PBS until production of mPBS begins. Marc Verbruggen, president and CEO of NatureWorks, said the joint venture enables his company to broaden its existing portfolio. The new materials expand Ingeo properties in terms of flexibility, toughness and heat resistance. Davies said PBS offers some important properties, but it has seen limited use over the years because it’s expensive. NatureWorks believes the bio-based PBS eventually will be cheaper than the traditional petroleum based material, which will expand the use of PBS. Davies said BioAmber had considered compounding the material in-house, but decided to contact NatureWorks so the two companies could work together.