ARTENIUS ELITE, NEW PET RESIN AS GREENER OPTION

- This new resin uses post-consumer recycled PET with standard virgin PET raw materials
- Artenius Elite has been approved for food contact packaging

El Prat de Llobregat (Spain), 30 January 2012. Artenius, the PET resins division of LSB has developed a new PET packaging material that combines virgin PET resin and post-consumer recycled PET as feedstock in the resin production process. The result is Artenius Elite, a remarkably pure, energy-efficient packaging resin.

The Artenius Elite chemical process replaces conventional non-renewable petrochemical raw materials with recycled material, saving natural resources and reducing the carbon footprint. With an excellent sustainability profile, Artenius Elite offers strength and versatility in combining post-consumer recycled materials into a food-safe packaging product with nine different references of resins available to meet various packing and moulding process needs.

“We have successfully created a PET packaging material that includes recycled resin in its manufacturing process, but with the same quality as virgin PET,” said Jordi Foguet, Technology Manager of Artenius. “The product development was a rigorous joint effort between R&D, our pilot plant, production sites and our in-house suppliers of recycled PET flakes. We are excited to bring this environmentally-friendly new product line to the market.”

The Artenius Elite formulation has been specifically developed for beverage packaging, including both still and carbonated water, and soft drinks. Depending on the base resin used, the product is suitable for processing as stretch blow moulding in one- and two-stage processes. All products in the family of Artenius Elite resins offer exceptional mechanical strength, colour and transparency characteristics that fulfil essential beverage package manufacturing demands.

Artenius Elite is produced under a proprietary chemical recycling process. The clean recycled PET is de-polymerized and mixed together with standard virgin PET raw materials, integrating both types of compounds into the re-polymerization process. Decontamination challenge tests carried out by FRAUNHOFER Institute prove that the Artenius production process results in resins as pure as the 100% virgin resin, even under the worst case contamination scenarios.
Such high level of decontamination means that Artenius Elite can be safely used for all direct food contact applications. In fact, the European Food Safety Agency (EFSA) has ruled that Artenius Elite’s process should not be treated differently from monomers manufactured by chemical synthesis. Therefore, Artenius Elite resins are covered by authorization of monomers and additives in the Commission Regulation 10/2011 instead of by Regulation (EC) 282/2008 on recycled plastic materials for food contact articles.

The Artenius Elite process has been also approved by the U.S. Food and Drug Administration (FDA) through its non-objection letter. The FDA determined that the proposed process is suitable for accepting a feedstock of clean post-consumer PET at levels up to 50% for containers for food contact with all food types.

“The virgin resin base used to produce Artenius Elite can be Artenius Aqua, Artenius Flow or Artenius Fast Flow+, plus a feedstock of 10, 25 or 50% of clean post-consumer recycled PET,” said Foguet. “We have nine different references of Artenius Elite resins, depending on the virgin resin base and on the content of recycled PET added during the chemical process.”

Currently, Artenius Elite is produced in the Italian factory: Artenius Italia, S.p.A. However, the factory located in Spain (El Prat) will start also to produce Artenius Elite soon.