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Augusto Rossetti, Senior Operations Director
PepsiCo Americas Beverages

Roll-fed sleeve delivers high-impact graphics and sustainability

For over 40 years, the Gatorade brand of sports performance beverages has been providing hydration for athletes and general consumers alike. It was born in the Floridian heat in the summer of 1965 after the University of Florida football coaching staff recruited a team of doctors to determine why the temperatures affected so many players. Gatorade has since become a global brand that is an electrolyte and fluid-replenishing staple in over 80 countries.

As its market share has grown, so too has the need for capitalizing on the brand appeal of Gatorade. The latest innovations in label and packaging technologies offered PepsiCo the perfect opportunity to meet increasing customer demand, as well as save on labeling costs.

Gatorade Dominican Republic Meets Customer Demand with Increased Shelf Appeal from New Label

The brand has become so well liked in the Caribbean that the demand prompted PepsiCo to explore a better and more cost-effective labeling solution, but one that would maintain the brand identity. To meet consumer affinity, PepsiCo opened a new bottling facility in the Haina industrial sector of the Dominican Republic in March 2011. On the labeling side, PepsiCo elected to switch to Polyphane™ Fit STS roll-fed sleeve film from Avery Dennison Label and Packaging Materials. The material is engineered for steam tunnels and delivers a shrink ratio of up to 50 percent. Previously, Gatorade was labeled with traditional shrink labels.



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*Mark Danner,
Business Development Manager-Beverage,
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With the help of Sacmi Labeling, PepsiCo opted to install a Roll Fed Sleeve Technology (RFST) labeler. The modular labeling machine allows the application of wraparound thermo-shrink plastic film labels starting directly from the film on the roll. It uses laser-welding technology for seaming at rates of 36,000 bottles per hour.

“Polyphane Fit gave us the exploratory platform to evaluate roll-fed sleeve and make a direct comparison to what we were using—shrink sleeve,” said Augusto Rossetti, senior operations director, PepsiCo Americas Beverages. “The start up qualification went very smoothly, from print production to user acceptance testing of the label applicator.

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With a clarity rating of 97, haze rating of 3 and a gloss rating of 135, Polyphane Fit delivers superior optics for high-end graphics representation and outstanding shelf appeal, and is an ideal medium for high-end graphics. The film works with all types of printing methods, including flexo, rotogravure, offset and digital. The press performance and graphics characteristics combine to give brand owners and packaging designers more options in marketing products.

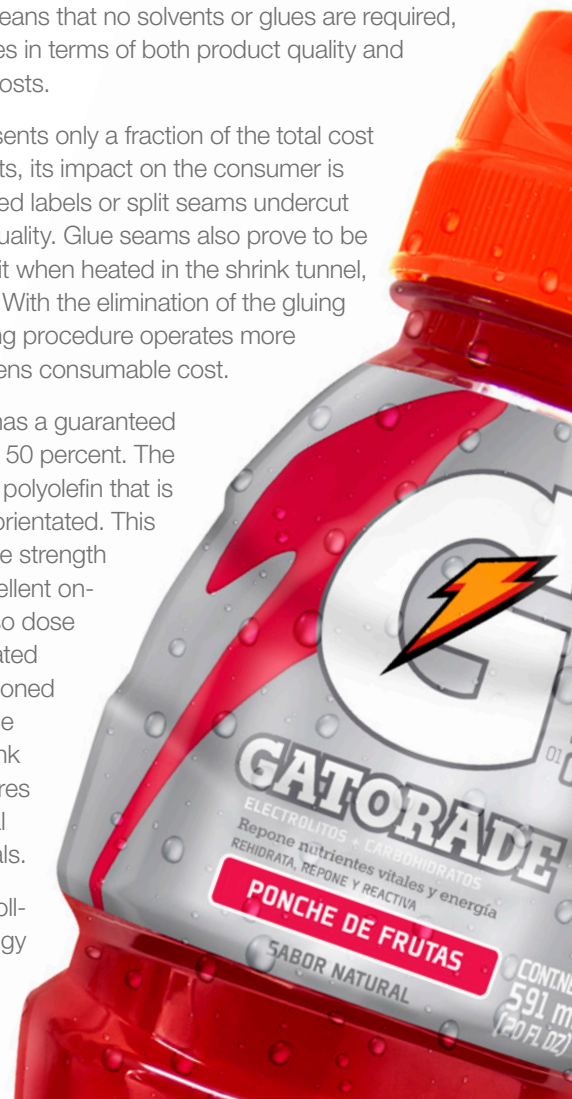
One of the key features of the RFST labeler is the laser system. The welding performance allows the wrap-around labels to be seamed on a mandrel forming a sleeve label. The Gatorade sleeve labels are created and applied directly on the bottles in a single process that significantly increases efficiency and saves on materials and energy.

Other distinctive features on the machine include the level of modularity and integration of the label production and application processes. Additionally, the use of mandrel and laser technology means that no solvents or glues are required, ensuring advantages in terms of both product quality and reducing material costs.

While a label represents only a fraction of the total cost to package products, its impact on the consumer is significant. Misplaced labels or split seams undercut the perception of quality. Glue seams also prove to be less robust and split when heated in the shrink tunnel, resulting in rework. With the elimination of the gluing process, the labeling procedure operates more efficiently, and lessens consumable cost.

Polyphane Fit film has a guaranteed shrink ratio of up to 50 percent. The film is a proprietary polyolefin that is machine direction orientated. This provides high tensile strength properties and excellent on-press stability. It also does not require refrigerated freight or air-conditioned storage because the film has higher shrink initiation temperatures versus conventional sleeve label materials.

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to shrink sleeve labeling, brand owners have the ability to increase shelf appeal and enhance brand recognition at a lower total applied cost,” said Mark Danner, business development manager-beverage, Avery Dennison Label and Packaging Materials. “Combining Polyphane Fit film with the roll-fed sleeve labeling technology from Sacmi allows PepsiCo to offer the market and consumers a recyclable package. Something they have not been able to achieve with traditional shrink sleeve decorated containers.”

Hot-fill applications, like Gatorade, are among the fastest growing segments in the beverage category. The hot-fill process results in a certain percentage of expansion and contraction of the PET bottles. Hot-fill PET bottles feature “vacuum panels,” which compensate for the negative pressure, or vacuum, that is produced during the cool-down period after the bottles are filled. These panels help to keep the bottle from collapsing, and subsequently deforming. The Polyphane Fit roll-fed sleeve material is engineered with a range of shrink properties, which makes it an ideal labeling technology for hot-fill PET applications.

Unfortunately, not all shrink sleeve materials are recycling friendly. For example, oriented polystyrene (OPS), polyvinyl chloride (PVC) and polyethylene terephthalate glycol (PETG) have a density greater than 1.0 and therefore are not recyclable.

Polyphane Fit film is compatible with existing PET recycling processes, is chlorine- and halogen-free, and has a specific gravity less than 1.0, which makes it possible to separate it from the PET regrind during the recycling process.

The new label, which stayed the same size as the one it replaced, prominently displays the simplified G overlaid with the iconic orange lightning bolt graphic, all against a backdrop of silver. A clear swoosh design in the silver background and to the left of the G lets the product color shine through to create a flavor-specific design cue. The label is the same size as the one it replaced and is used on 400 ml (13.5 oz.), 591 ml (20 oz.) and 1 liter (32 oz.) bottles. The label wraps around the top third of the bottle, leaving a large portion of the beverage visible for presentation. The labels were flexo printed, seven-colors, on an Aquaflex press by Labels, S.A. DE C.V. in San Salvador, El Salvador.

“The use of pre-press techniques and hi-tech software, along with great technical support from our team and Avery Dennison, made it possible to successfully create

high-quality graphics,” said Manlio Guzman, technical director for Labels S.A. DE C.V.

“The work done by Labels to implement the RFST was key to the success of the project.”

The new plant is supplying 100 percent of the product demand in the Dominican Republic and has now expanded capacity to supply 100 percent of sales in Puerto Rico. The operation will eventually expand further to include all of the Bahamas and Trinidad Tobago.

In choosing a more sustainable material with Polyphane Fit, Gatorade Dominican Republic is staying aligned with its facility, which is the most modern and ecological in the Caribbean. The operation features a boiler system that uses natural gas, which ensures a savings of up to 49 percent in energy. The facility also houses a modern water treatment system. Overall, the state-of-the-art plant has the capacity to fill 500,000 bottles a day.



Note: Polyphane Fit was developed and is manufactured by Polysack Plastics Industries, Ltd., Israel. Avery Dennison Corporation has exclusive rights to distribute and sell Polyphane Fit roll-fed sleeve films in the United States, Mexico, Canada, Australia and New Zealand.

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