

.....more about the environment. SmartCycle™ works quite well on our machines. There's no waste. Developed in 2006, SmartCycle™ films surpass US FDA regulations for direct food contact, according to Klockner Pentaplast, and are certified to meet domestic packaging regulations. In addition, it says the film exceed California and Oregon rigid packaging container regulations.

Packaging made out of Smartcycle carries as special identifying mark to help increase public awareness of PET bottle recycling. Printed on the RADIUS Toothbrush blister packing card, the mark is the same petaloid shape that's found on the base of most PET soda bottles – sort of a four leaf clover. Each clover represents a stage in the recycling process: Collecting: Sorting: Reprocessing: Thermoforming. RADIUS hopes consumers will recognize the mark and factor packaging bearing the mark into their purchasing decisions. “Plastic bottles have to be seen as a resource, not as garbage,” says Michael Brown, brand founder and managing director of Packaging 2.0 LLC, which holds the Smartcycle license. Today, Brown collaborates with Klockner Pentaplast as the exclusive global supplier of his creation, Smart-cycle packaging films. “Smart-Cycle helps reinforce recycling behavior,” he says. Brown would like to see the current recycling rate go up to 75% and decrease landfill volume at the same time.

Leaves less of a footprint

It didn't take much persuading on Brown's part to convince RADIUS that SmartCycle was worth investigating. Brown

recommended that RADIUS consult with Universal Protective Packaging, Inc. UPPI is a thermoformer located in Mechanicsburg, PA - about 50 miles from the RADIUS plant – that already works with SmartCycle materials. Tim Ritter, UPPI's VP of Engineering and Marketing, says he likes the machinability of the SmartCycle film, which UPPI runs on Sencorp 2500 forming equipment.

“it's consistent,” Ritter says. “One reason we won the RADIUS bid is because we could show them other SmartCycle jobs we have done and why they were successful.” Klockner Pentaplast manufactures the film from water and drink bottles using a proprietary process and a resin that meets the same FDA standards as those for virgin resins, according to Brown. When he conceived the idea of making PET film from post-consumer-recycled bottles, Brown approached Klockner Pentaplast and didn't look further. Ritter says UPPI uses a fair amount of SmartCycle film. “It performs as well as virgin PET and it gives a second life to raw material on a daily basis” he says. “Consumers can feel good about it because it leaves less of an environmental footprint.”

Too Many Travel Cases

Foley mentions that he had already been searching for sustainable packaging before meeting Brown. Previously the toothbrushes had been packed in an injection molded travel case with a wall clip that held the toothbrush head in place. “The case could be used over and over,” Foley remembers, “but it was heavy to

ship and used a lot of energy to deliver. Many customers complained about having too many travel cases.” Experimenting with more sustainable alternatives, RADIUS had developed molds for a thermoformed blister-pack container by the time it talked with UPPI about the project. The molds only needed a few, slight modifications to run on UPPI's forming machines. The resulting blister is sealed on the edges of cardstock made from 35% recycled paper. Incorporating a hanger hole and a footed “stand” so that the toothbrush can be displayed upright on the store shelves; the blister has a depth of 1”.

To package the brushes, RADIUS uses a six station blister sealer from Visual Packaging and a 15 mil forming film from UPPI. The toothbrushes are manually loaded into the machine, along with each thermoformed blister and the machine automatically indexes the blisters to sealing, cutting and ejection stations. RADIUS ships hundreds of thousands of toothbrush packs a year, both domestically and internationally.

A handle on energy savings

Foley says the company saves 5,900 gallons of diesel a year by shipping its toothbrushes in the SmartCycle package because it is so light. “It holds up well at retail and creates a beautiful, clear display of the product.” The RADIUS team is planning more SmartCycle packaging concepts and UPPI and Klockner Pentaplast will be there to sink some teeth into the next toothbrush packaging project RADIUS envisions.