

## Sustainable Films: Microsoft maps road to success with recycled PET

**A new, 50-percent post-consumer-recycled PET brings clarity to Streets & Trips with GPS Locator.**

Creating a package that uses sustainable films, Microsoft has mapped a course for all-around success. Sales of the company's number-one best-selling travel and map software, Streets & Trips 2007 with GPS Locator, doubled the projected launch number. The Microsoft packaging illustrates how it's possible to honor a real commitment to sustainability with packaging that delivers high shelf impact.



The introduction of SmartCycle(TM) 150 PETE polyethylene terephthalate from Klöckner Pentaplast ([www.kpfilms.com](http://www.kpfilms.com)) in October 2006 coincided with the packaging market's emphasis on sustainability. Made from a minimum of 50-percent post-consumer-recycled polyester bottles, SmartCycle films surpass U.S. Food & Drug Administration regulations for direct food contact and are certified to meet domestic packaging regulations. In addition, the films exceed California and Oregon rigid plastic packaging container regulations. It is the brainchild of Michael Brown, brand founder and managing partner of Packaging 2.0 LLC ([www.packaging2.com](http://www.packaging2.com)), which holds the SmartCycle license. He has joined with Klöckner Pentaplast as the exclusive global supplier of SmartCycle packaging films. The company's business manager for thermoforming films, Pete Gianniny, elaborates, "SmartCycle is a wonderful opportunity to increase public awareness about plastic package recycling. Now we must educate people and encourage consumers to recycle their bottles. Those who do will be lessening the need for new petrochemical feedstocks."

This education begins with marking all packages with the SmartCycle logo on the petaloid base found on the bottom of most PET bottles. With a unique identifying mark, SmartCycle packages encourage PET bottle recycling rates to continue to grow. Concludes Gianniny, "We at Klöckner Pentaplast want to provide a material option to consumer product companies and retailers for their thermoformed plastic packaging while building long-term value by helping them move toward their sustainable packaging goals."



To produce the Streets & Trips packaging, Microsoft turned to Transparent Container Co., Inc. ([www.transparentcontainer.com](http://www.transparentcontainer.com)), a resource for visual packaging solutions, including custom thermoformed packaging, clear folding cartons and blister-packs for consumer package goods companies. By remaining material-neutral with an emphasis toward environmental consciousness and a commitment to sustainability, Transparent Container has helped its clients succeed in the marketplace. In business for more than 45 years, the company creates clear packaging that grabs consumers' attention. Dan Ahern, Transparent Container's vp of marketing, explains, "We offer solutions that focus on product visibility within the package. Microsoft had the idea of creating a reusable carry case for the product's hardware components that would also allow the consumer to see the product inside of the package. So we were able to employ two of our technologies: thermoforming and folding cartons." This met Microsoft's objective to emphasize both hardware (the actual GPS device and the dongle, which is the adaptor and the connector for a PC to the GPS) and software, with the added strategic benefit of having the product displayed in two locations in the store.

Previous packaging for Streets & Trips consisted of a typical paperboard box with a die-cut square to display the GPS device contained within a snap-together plastic tray that would be torn away and thrown out. At the outset of the 2007 project, Microsoft determined the need for a unique package that would address numerous design issues and help set Streets & Trips GPS apart from the competition at-shelf. Ahern says, "The footprint for the 2007 package is the same, but the hardware components changed size. The GPS and the adapter are smaller, and even though we started out with six inches of cable, it grew closer to six feet before we were done."

One of the major objectives was keeping all of the electronic components organized. "We presented roughly eleven different structural ideas that addressed this challenge," explains Ahern. "All of the ideas incorporated a carry case to hold all of the components. The carry case was to be something that could be used again and again, not treated as a disposable package."

As the final design developed, it was decided that the packaging materials used should emphasize sustainable concepts. SmartCycle 150 PETE was the choice. Says Microsoft's packaging project manager, Scott Ballantine, "We wanted to raise consumer awareness about how to use recycled materials in new ways. We also wanted a carry case that people could use to store the GPS and its components. The finished package fits in the glove compartment or CD slot of a car. It is based on a compact, sunglass-case design, and for that reason, is value-added because it is reusable. And consumers can take pride knowing their bottle-recycling efforts have had direct impact in creating this extended-use package."

Microsoft's Ballantine, couldn't be happier. "Microsoft is a member of the Sustainable Packaging Coalition. Recycling of more post-consumer waste is one of the many next steps toward greater sustainability in plastic packaging, and Microsoft and Transparent Container are behind this all the way," he says.

The end result is packaging so appealing that Microsoft increased its order size with Transparent Container in anticipation of hyperactive sales. With the assistance of Microsoft's graphic design team, packaging for Streets & Trips GPS created a 3D effect that gives one the feeling of speed and movement.

The 3D effect was achieved by taking advantage of PET's excellent printing properties, the likes of which have never really been seen on retail shelves before. All together, the package consists of three plastic insert layers and one DVD case:

1. The outer folding carton/box
2. The interior support device
3. The inside thermoformed clamshell, or SmartCycle carry case
4. The ultra-thin media (disk) case

The outer box is made using 25-percent post-industrial-recycled PET. The interior support device acts as a tray and holds the carry case on top of the media (disk) case. A die-cut square in both the outer box and the tray allows the GPS device to be seen (encased in its SmartCycle clamshell).

The clamshell is molded, folded and hinged and features cavities for the GPS device, the dongle/adaptor and approximately 6 ft of cable that wraps around the perimeter and ends on either side above the dongle/adaptor. The top of the clamshell is embossed with the Microsoft logo, as well as the SmartCycle logo. The media case is in back of that.

Explains Microsoft's Kris Rinenbach, "The inserts are printed directly onto the plastic substrates. You can look through the first two layers and see 3D clouds. You get the illusion of movement and speed because our graphic design team helped create the plastic inserts to look slightly blurred. Our graphic design team gets a lot of credit for the slick appearance of the package.

"The three layers that comprise the packaging are positioned to achieve the 3D effect. There is no paperboard box as with the 2006 version. If the graphics were printed on paper, you could not see through to the next layer—an advantage that plastic provides. The carry case is actually designed to tip back at a forty-five-degree angle, with the bottom touching the front edge of the outer carton in order to get the 3D effect. Microsoft has never done a plastic layer before."

Ahern at Transparent Container summarizes it this way: "The ability to achieve this 3D effect is obtained through the use of clear and translucent printing effects on a clear PET substrate. This is the first package of this type in the product category. The 3D is possible because of the clarity of Klöckner Pentaplast films, in this case SmartCycle 150 PETE. We used a **Sencorp** [[www.sencorp.com](http://www.sencorp.com)] 2500 in-line thermoformer to make the clamshell, and the performance characteristics of SmartCycle film is as good as any of their other rigid films."

There is even more to the assembly story, as Microsoft's packaging project manager tells it. "What is really unusual about the assembly process is that we designed and manufactured the clamshell carry case in the U.S. and then provided it to our hardware manufacturing partner in China," Ballantine says. "Typically, a clamshell would be produced in Asia or where the manufacturer is located. But because Asia does not yet produce rigid films made from fifty-percent post-consumer-recycled polyester bottles, we decided to send the SmartCycle clamshell over to China from the U.S.

"Previously, the hardware components would have to be individually wrapped and shipped by the GPS provider, Pharos, to our manual packing service, Sonopress USA [[www.sonopress.com](http://www.sonopress.com)]. Parts then would be unpacked and repacked into the clamshells. We changed that by moving the carry case up the supply stream and eliminating all of the unnecessary secondary packaging and the associated packing and unpacking labor. The cost of sending the clamshell to China is balanced by the fact that now, the components are already placed in the clamshell when they arrive at Sonopress in the U.S. for final assembly of all the pieces. Otherwise, if we didn't send the clamshell to China, at Sonopress the individual components would then have to be unwrapped and placed in the clamshell there." Ballantine explains that the savings comes from the reduction in 1) touch costs (wrapping and unwrapping individual components), 2) packaging supply costs (i.e., the wrapping material), and 3) time costs. "Having the Chinese place the components directly into the finished clamshell eliminates much of these costs," he says.

We have great communication with Microsoft," Ahern says, referring to the timeline for the entire packaging project. "During the project, we were in constant contact," he says. Ballantine elaborates: "The whole project took six months, the same as a typical launch, even though we had never done a plastic insert like this before." The project was begun on Feb. 15, 2006, and the components were placed in the



clamshell in China in June. In late July 2006, Streets & Trips GPS hit the retail shelf at places such as computer stores, Wal-Mart, Costco, Best Buy, Target and online retailers. The product was also displayed at PACK EXPO International by the Sustainable Packaging Coalition.

"The SmartCycle mark is designed to increase public awareness and enhance the recycling of PET bottles," states Brown of Packaging 2.0. According to the Report on Post Consumer PET Container Recycling Activity from the National Assn. for PET Container Resources (NAPCOR), 5.075 billion lb of PET bottles and jars entered the U.S. market in 2005, and a record 1.17 billion lb of post-consumer PET bottles were collected for recycling, of which only 71 million lb went to the film and sheet market. "A key goal of the SmartCycle program is to help people feel smart about their packaging choice by conveying the story of recycling and sustainable packaging to the entire packaging value chain: consumers, retailers, OEMs, converters and resource-recovery plants," Brown says. "As people become more aware of the results of their recycling efforts, it will drive an increase in the recycling of their plastic bottles, and the availability of PET feedstock will increase. That's why it's called SmartCycle. We want to create a cycle of reusing PET over again, such as with the Streets & Trips GPS clamshell."

Ahern sees the results of the efforts. "Each channel that stocks Streets & Trips GPS increased their initial order," he says. "Not only can customers feel good about purchasing products packaged with SmartCycle film, but the high-quality appearance of the package also leads consumers to gravitate toward it when they see the product on the shelf. Promoting a positive bottle-recycling message while purchasing a visually attractive product makes a consumer's choice easy. Klöckner Pentaplast is doing a real service to both the community and the earth. And SmartCycle film is just a great-looking material. It has great clarity designed to raise consumer consciousness and excellent performance characteristics. We're working on similar interior packages for future devices that Microsoft will be releasing in the near future."

**More information is available:**

- **Klöckner Pentaplast**, 540/832-3600. [www.kpfilms.com](http://www.kpfilms.com).
- **Packaging 2.0 LLC**, 401/225-0190. [www.packaging2.com](http://www.packaging2.com).
- **Sencorp**, 508/771-9400. [www.sencorp-inc.com](http://www.sencorp-inc.com).
- **Sonopress USA**, 828/658-2000. [www.sonopress.com](http://www.sonopress.com).
- **Transparent Container Co.**, 888/449-8520. [www.transparentcontainer.com](http://www.transparentcontainer.com).