



# Compounding Lines

Your Global Compounder of Custom Engineered Thermoplastics

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## Getting the Hang Of It!

### With the right molder & material finally in place, a manufacturer optimizes production of innovative surfing product

The Skedeleski's, owners and operators of surfing product development company **SurfCo Hawaii, Inc.** are, not surprisingly, a surfing family. They understand that along with the excitement of the sport comes the occasional bump and bruise. However, when David Skedeleski and his wife got a call from the local emergency room regarding their teenage son, they were not prepared for what they found when they got there.

*"Michael had a severe cut on his inner thigh from the hard fiberglass fin on his board. It took a big chunk out of his leg and required more than 200 stitches,"* recalled Skedeleski. *"As my wife and I watched the surgeon work on our son, I vowed to develop a surfboard fin with a flexible edge that would greatly reduce the chances of fin cuts to surfers."*

He soon learned that injuries like Michael's were disturbingly common. In fact, the surgeon at the hospital explained to him how much time he spent sewing up fin gashes. Skedeleski also realized that Michael and patients like him could actually be counted among

the lucky ones. *"Unfortunately, many people with severe fin cuts never make it to the hospital,"* he said.

Skedeleski, who had previously developed a very well received nose guard that protects surfers from the hard tips of their boards, was driven to help reduce these tragedies as well. He soon designed a rigid fin with a flexible edge that could replace the standard hard and sharp edge fin on surf and stand up paddle boards. Dubbed Pro Teck fins, they not only provide safer surfing, they also enhance the performance of the board, since the flexible material allowed for tighter turns. Pro Teck fins were eagerly received by surfers, surf shops, surf schools and the entire boarding community. But, he reports, actually producing them—and doing so consistently—has been a long-term challenge for the small company.

According to Skedeleski, the tooling costs were astronomical. In addition, the company's search for a combination of the best material source and a molder with the experience and skill to overcome

the challenges of overmolding a flexible polyurethane edge onto the surface of a 40% long fiber reinforced composite has been a source of frustration lasting nearly two decades. Further, he reports that a number of times when he thought the problems were solved, one of the suppliers would be acquired or otherwise change operations, leaving him in the lurch.

*"As a result, we've been plagued by periods of low supply or struggled to the point where we hardly had inventory available for several years,"* he explained. *"It was very frustrating—people depend on this product and I hated telling them that we don't know when we can supply them."* *cont.*





**"The RTP Company material definitely gives SurfCo a better looking product"**

-Sam Dettore,  
Business Development  
Manager for AAIMS

### SurfCo

**Market:** Consumer Goods

**Compound:** Glass Fiber Reinforced Rigid Thermoplastic Polyurethane (RTPU)

cont.

That's why he was so overjoyed when he became reacquainted with All American Injection Molding Services (AAIMS) in early 2015.

*"They are very skilled—they figured out the issues with the overmolding process that several other companies couldn't, and started helping us fill our product pipeline very quickly," he said.*

As they began production, AAIMS, in turn, looked to **RTP Company** for their 40% long fiber composite when the material from the most recent incumbent materials supplier ran out.

*"The **RTP Company** material definitely gives **SurfCo** a better looking product—the surface finish is a much richer and more brilliant black, and there is less glass on the*

*surface than the material that had been used in the past," explained Sam Dettore, Business Development Manager for AAIMS. "It runs very well in our process, too. The scrap percentage on the project is way down."*

Now that he finally has the right team in place, Skedeleski notes that, as of late December 2015, **SurfCo** has their Pro Teck product pipeline completely full—for the first time in years.

*"It's like a renaissance, a rebirth for us," he said. "The buzz is getting out there and we look forward to 2016 being the best year ever for Pro Teck fins—and the safest one for the surfers who use them."*





# Raising the "Steaks"!

**New plastics innovation improves consumer safety in meat processing industry**

**Safari Belting Systems** manufactures modular plastic conveyor systems that are used extensively by meat processors. According to President Chris Smith, customers often come to them with specialty product requests, but one recent request led **Safari** to seek out a plastics compounder offering greater expertise than they had access to at the time.

*"It was a very positive experience—we were very glad to have found **RTP Company**,"* he said.

Smith notes that in the early days of meat processing, conveyors were made of stainless steel. In rare instances, a small metal chip might slough off a high speed belt and find its way into the ground meat. Safety conscious companies proactively x-rayed their products to ensure that metal-tainted meat never made it out the door. Although metal conveyors have long since been replaced with plastic ones, most meat processors have not made efforts to similarly test for plastic chips, presumably because of the relative harmlessness of the material.

Nevertheless, with optimal food safety such a hot issue today, a **Safari** customer, one of the world's largest meat processors, decided to raise the stakes and see if they could add a plastics inspection to their quality control procedures. They asked **Safari** if they could make their plastic conveyor components x-ray detectable.

*"Unfortunately, our initial attempts were not successful,"* explained Smith. *"We made acetal that was x-ray detectable, but the process weakened it so much, it was unusable."*

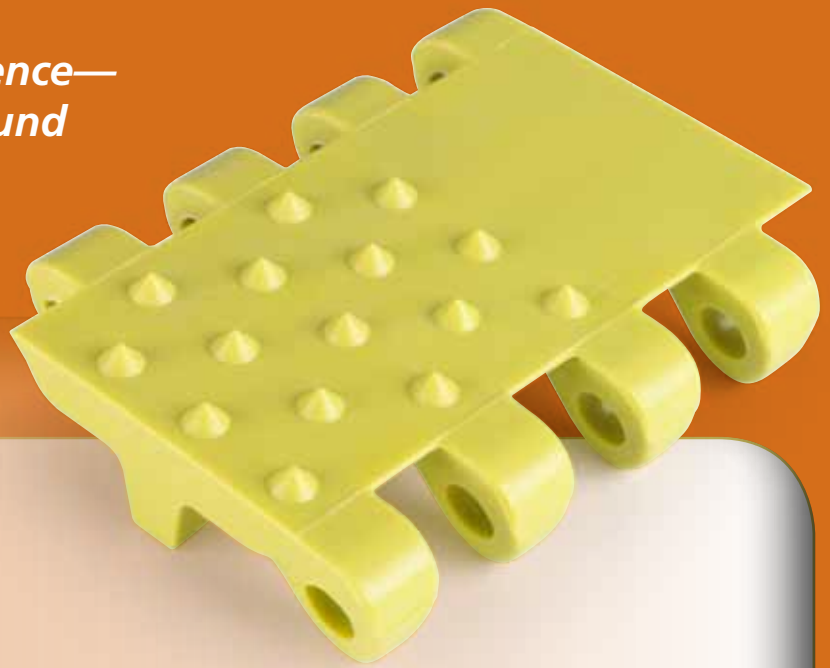
They sought out a new resource and soon found **RTP Company** through a colleague.

*"We explained to **RTP Company** the properties we needed... high impact, x-ray detectable, and FDA approved for food contact... and they ran with it,"* he explained.



***“It was a very positive experience—we were very glad to have found RTP Company.”***

*President Chris Smith,  
Safari Belting Systems*



Adding to the challenge, the customer also suggested making the plastic more visible to the eye, helping further decrease the likelihood of a chip making its way through the line. Could **RTP Company** produce a material in a unique color, as well?

*“We selected a bright, fluorescent safety green color that would immediately stand out from any ground meat, and **RTP Company** matched it precisely,” said Smith.*

The result—a high impact, x-ray detectable, FDA-approved, fluorescent green TPU compound is now being used on belts in several processing lines, and according to Smith, the customer is delighted.

*“They’ve added an x-ray device to their lines and they are confident this has improved their food safety assurance efforts even further,” he said. “It’s also made us an even more valuable supplier in their eyes, having met this need for them.”*

*“We never could have done it without **RTP Company’s** help. We’re a relatively small company, but they made us feel like we were a big business, giving us all the time and attention and resources we needed. We’ve already turned to them with other plastics challenges and they are just as effective. They are a great partner for us.”*

**Safari Belting Systems**

**Market:** Industrial  
**Compound:** RTP 1200 Series Green



# Attention, Please!

## Custom compound helps bring eye-grabbing vending machines to life

**Pyramid Technologies** is the leading developer of American-made bill acceptor modules—a key component of vending and amusement machines of all kinds. Recently, the innovative company had a brainstorm—what if they could develop a bill acceptor that not only had the capability of flashing colorful lights to draw in consumers, but would also allow machine operators to program their own colors?

*“Up until recently, the industry standard for bill acceptors was just a couple of little green lights showing consumers where to insert their bill,”* explains Mechanical Engineer Leif Strom. *“We saw an opportunity to add a lot more excitement and utility and provide even more value to our customers.”*

The company designed a bill acceptor that featured four areas that, by default, would shimmer through a rotating rainbow of bright colors. But, according to Strom, that would only be the beginning. *“This product would also provide the capability to customize patterns and colors however and whenever the operator desired,”* he explained.

Each of the lighted areas would be driven by a generous number of LEDs covered by polycarbonate bezels designed to diffuse the light into an even, eye-pleasing, attention-getting glow. But, according to Strom, **Pyramid** soon ran into a production challenge.

*“The polycarbonate needed to have a particular milky white tint to achieve the optimum effect we were looking for, and our supplier at the time did not have that available,”* he explained. *“In addition, the sample material they gave us was coming out of the mold with a lot of bubbles, so we needed it to be adjusted to deliver a lower flow rate.”*

In both cases, he reports, the plastics supplier refused to modify the material because **Pyramid** wasn't a large enough customer. *“They invited us to try another off-the-shelf product, but that was about the extent of their assistance,”* he said.

Strom knew of **RTP Company** because previously, **Pyramid** had purchased an off-the shelf product to take advantage of **RTP Company's** fast delivery time. But he also knew that **RTP Company** had a reputation as a custom compounder that was glad to help smaller batch customers, too.

*“Their rep came in, looked at our situation, asked a lot of smart questions, and took it back to the lab,”* reported Strom. *“Within a very short time, he had a test batch for us—and it ran perfectly the very first time. No bubbles at all, and the milky white opacity they compounded makes the LED colors look as vibrant as we had hoped.”*

The result is **Pyramid's** Spectra bill acceptor, released earlier this year. With just a few hundred in the field so far, the results have been remarkable.

Delighted with finding **RTP Company's** superior products and service, Strom has already asked **RTP Company** to custom formulate another material for a different component, and he looks forward to an even closer partnership in the future.

*“I'm very glad to tell people about the quality of **RTP Company**,”* said Strom. *“They're very knowledgeable, very easy to work with, and they really helped us out of a bind.”*

### Pyramid Technologies

**Market:** Business Machines

**Compound:** RTP 300 series with light diffusion pigment

