

K-Resin® goes to a galaxy far, far away

Plastics Technical Center team plays an integral role in developing Anakin Skywalker Light Saber

Twenty-five years ago, the release of the original *Star Wars* movie introduced millions of moviegoers to universe full of wookiees, stormtroopers and space rebels. Since then the *Star Wars* franchise has spawned two sequels, two prequels, books, video games, Web sites, cereals and just about every kind of toy you can imagine. In fact international sales of *Star Wars* toys total more than \$2 billion dollars. Since the beginning, Kenner Toys (acquired by Hasbro in 1991) has held the official licensing agreement from Lucasfilms, Ltd.

CPChem's relationship with Hasbro spans more than a quarter of a century as Hasbro uses K-Resin® in hundreds of their toys due to its glass-like clarity, ability to take on a variety of colors and its safety properties. Eddie Edmunds, K-Resin Market Director, explains, "K-Resin® is highly shatter resistant and even if it should break, it produces blunt breaks with no sharp edges, which makes it perfect for children's toys."

While meeting with Hasbro in 2000, K-Resin® Ohio Territory Sales Manager Keith Edwards discovered that they were working on a new, highly confidential *Star Wars* toy to coincide with launch of the movie *Star Wars II – Attack of the Clones*. "During the course of the conversation, Hasbro disclosed that they hadn't yet determined which material they would use for the toy. At that time, the HCC K-Resin® facility was still under reconstruction and I didn't know how long CPChem would be out of the market, but I wanted to find a way to help," said Edwards.

So Edwards volunteered CPChem's Plastics Research and Technology Center in Bartlesville, OK to help work out some of the production center issues Hasbro had encountered at their molder in China (even though there was the possibility that the K-Resin® production line might not be up and running when the time came to produce these toys.) Hasbro took CPChem up on the offer and had the molds shipped to Oklahoma. "It was then that we learned the toy we'd be working on was the Anakin Skywalker Light Saber," said Edwards. "We also learned just how difficult a part this would be to make when we received the molds, but we were committed to finding a solution that would allow the light saber application to launch on time."

Mike Davis, Lead Technician and Terry Wheat, Plastics Technician, headed up the research team responsible for recommending materials and redesigning the light saber. "This project had several challenges right off the bat. First, the existing mold had nine separate tools and all of the markings were in Chinese. Second, the electric motors ran off a different voltage, so we had to find converters before we could even get started. Lastly, we were working with a fairly complex tool. With numerous interlocking pieces, there is little room for error," tells Wheat.

After examining the problem, the CPChem research team discussed their proposed changes with Hasbro, but for various reasons Hasbro decided to go with a standard blow molded versions for all production. Working with CPChem developmental engineers, the team then

formulated four different blends of K-Resin® that far exceeded Hasbro's impact test. Shortly after, Hasbro notified CPChem that they planned to use the KK38 Resin for manufacturing the light sabers. Then inexplicably, Hasbro placed the project on hold. "At this point, we didn't know if they were even going to produce the light saber," said Edwards.

A few months before *Star Wars II – Attack of the Clones* was released, Edmunds got a call from Dionne Cheung, CPChem's Sales Representative in Hong Kong notifying him that CPChem had already sold 250,000 pounds of K-Resin® into the light saber project. When Edmunds contacted Hasbro, they told him that the project was indeed taking off. The Anakin Skywalker Light Saber was a huge success, selling out within weeks of the movie's launch and incorporated over a million pounds of K-Resin®, which more than recouped CPChem's investment in research.

"At a time when the K-Resin® team needed a boost, this project captured all of our resources, gave us something to keep us focused and allowed us to recapture our enthusiasm," said Edmunds. "Even in the face of not having anything to sell, the K-Resin® team found a way to be a resource to our customers. We treated Hasbro as a customer, even though at that time, they weren't," further explained Edwards. The team's blood, sweat and tears recently paid off as Hasbro just signed a new contract with K-Resin®, no doubt partially due to CPChem's willingness to go above and beyond customer expectations.

To celebrate this victory, at the fourth quarter sales meeting Edmunds presented Edwards with a Jedi Master's robe and his very own Anakin Skywalker Light Saber. "To become a Jedi requires the deepest commitment and most serious mind.... much like the path of a successful K-Resin® team member," joked Edmunds.