DuPont: Jacque of All Trades

In 1800, Eleuthère Irénée (E.I.) du Pont and his family fled the French Revolution and found refuge in America. The talented scientist and resourceful businessman brought money and savvy in explosive mechanics, a fledgling industry on the west side of the Atlantic.

After founding the DuPont mill on the banks of the Brandywine River outside of Wilmington, Delaware, E.I.'s engineering expertise and reputation for efficiency grew. His enterprise eventually became the largest gunpowder supplier for the US Military, providing half the powder used by the Union Army during the Civil War.

Even after his passing, E.I.'s spirit of practical curiosity ripples through each generation of DuPont owners and employees. Little did he know that his progressive establishment would thrive 214-years later as one of the world's most innovative, successful conglomerates and an ambassador of "The Miracles of Science."

Elbows deep in a variety of industries, including automobile, refrigeration, textile and filament manufacturing, DuPont is a bona fide Jack - er - Jacque-of-all-trades. But perhaps DuPont's most important contribution to the planet is its invention of revolutionary polymers, like Vespel, neoprene, Kevlar, and nylon.

"DuPont came up with the first nylon back in 1935," says DuPont's Principal Investigator, John Feathers. "At that time, the first commercial use was ladies nylon stockings."
But much like its need for gunpowder in the 1860's, the US Government had a higher calling than fashion for DuPont.

When Japan invaded Manchuria in 1931, an unusual setback hit the United States: acquiring hog bristles was suddenly a challenge. Up until the 1930's, paintbrushes were made primarily from hog bristles, namely five different kinds of hog bristles from five different regions in China.

"There really wasn't anything that could mimic the hog bristle," says Feathers, a DuPont employee since 1977.

Inclusion in World War II was imminent, and the US Government had no paintbrushes to coat their navy ships. Desperate for a non-hog bristle solution to their paintbrush dilemma, the military approached DuPont, saying they needed something - anything - to make brushes.

"So we came up with the tapered filament," says Feathers. "Each filament is big on the bottom and smaller at the top. We made five different taper ratios to mimic the five different kinds of hogs. That was the advent of synthetic paintbrushes in the world."

The invention of nylon marked the world's first true synthetic fiber and became one of DuPont's most successful products.

"[Nylon's] one of the biggest impacts we've had on the brush industry," says DuPont's America Sales Manager, John Hackney. "That impact and contribution continues today, whether it's in paintbrushes, mascara brushes or toothbrushes."
In fact, the type of toothbrush we use today is in large part thanks to the research and development of DuPont's determined team of filament experts.

Before DuPont's synthetic fibers came on the scene, "most of the toothbrushes were made with hog bristles," says Global Products Manager, James Chi. "That's not very hygienic. I feel proud to say that DuPont had the foresight to put [synthetic fibers] to use in toothbrushes."

"We are a filament provider," says Chi, who joined DuPont's filament department over three years ago. "But we don't just stop there; we go to the supermarket to see what filaments are out there, what our competitors are doing, and what consumers need."

"We make sure they can take it to the bank that [those brushes are] going to perform," says Feathers. "Because we're consumers too. As customers, we also see what works, and what doesn't work. We value the voice of the customer. We have to listen closely to what they're asking for. We try to keep in touch as closely as we can with the customers."

One of the most important ways DuPont stays in touch with customers is through face-time at the annual American Brush Manufacturers Association (ABMA) conference.
"All of our customers participate in it," says Feathers. "It has that kind of draw for people in the industry. Everyone has the same focus. At the ABMA conference, everybody in the room knows exactly how to make a paintbrush. It reaches all customers and potential new customers, and gives us a chance to make contact with even the smallest customers at least once a year."

As a founding member of the ABMA, DuPont has reaped great benefit from its relationship with ABMA and its members.

"The ABMA is a great fit for us," says Hackney, a DuPont employee since 1995. "You never know where you're going to find a mentor, but the ABMA is a great place for that."

This global science company still has its headquarters in Delaware, where E.I. setup shop over 200 years ago. Perhaps E.I. would be surprised to hear that his Jaqee-of-all-trades company now employs over 60,000 people at laboratories in China, India and the Netherlands. And even though automobiles weren't even a notion in the early 1800's, DuPont's name was emblazoned on the Hendrick Motorsports Car Number 24, driven by Jeff Gordon himself.

From oral care to cosmetic application to painting navy submarines and space shuttles, DuPont's in the big business of solving global challenges through the fine filaments that fill our everyday lives. Congrats, DuPont! Here's to another 200 years of innovation and discovery!