

'Kiss-Cote' Could Even Work On The Kitchen Sink

BY LUCY REILLY

A Florida research chemist has developed an all-purpose non-stick protective coating that acts as a cleaner and a sealant to be used on numerous products, ranging from airplanes to power plants to artificial cardiac devices.

Keith Kent, chairman of Tampa-based Kent Integrated Scientific Systems Inc., received a patent (No. 4,839,456) on the thin-film polymer called Kiss-Cote last month. Originally designed as a dental coating to protect teeth from plaque, Kiss-Cote represents a new family of polymers, says Kent, who, until a chemical accident five years ago, practiced dentistry.

Kent began testing the polymer coating in 1982. After minor setbacks—including a legal dispute in 1986 in U.S. Federal District Court in Baltimore with Michael Fay, New Zealand's challenger to the America's Cup—Kent plans to bombard the consumer market at every level with the product. He says that testing of the pure silicone material has proven beneficial on fabrics, woods, metals, masonry and plastics. And with buyout offers coming in from virtually every major chemical and coating company in the world, Kent is content to remain sitting atop what he hopes will become a promising empire.

"We have a product that really works, which is rather unusual today," Kent says. "It's wipe on, wipe off. Anybody can use it." The material will be available in numerous forms, including liquid and gel forms.

Kent declined to be specific about the composition of the patent for competitive purposes. According to the Official Gazette of the U.S. Patent and Trademark Office, the patent is for a self-adhesive, drag-reducing polymeric coating. The coating is a mixture of silicone polymer with a catalyst—enough to polymerize all of the silicone polymer.

"The first breakthrough came when we coated a fiberglass boat hull and left it in the Gulf of Mexico for two years," Kent says. "It was encrusted with barnacles more than an inch thick when we pulled it out of the water, but they were easy to remove."

That was in 1985. Since then, word has spread throughout the racing community of Kent's success. It seems that Kiss-Cote accounts for a 2 to 7 percent increase in boat speed. Last year, two boat speed records were set and three world boat championships were won with boats using the non-toxic polymer. Actor Don Johnson used the coating when he won the World Superboat Championship with a boat owned by real estate developer Tom Gentry. The maker of Gentry's boat is Wellcraft Marine, which now uses the coating on its fleet of racing boats.

Based on the same principal, the polymer is under testing at Adelphia, N.J.-based Lightfield Ammunitions Inc. Lightfield is the sole U.S. licensee of high velocity penetration projectiles for the U.S. Marine Corps. The ballistics company is conducting preliminary tests of Kiss-Cote at The Proofhouse, a government-owned ballistics research lab in Birmingham, England, says William Coury, Lightfield consultant/ballistician.

Initial product tests using an 18-inch machine-held nine-millimeter barrel "finds an average increase of velocity of about 10 percent using [Kiss-Cote]," Coury says. "The indication is that there's obviously something there."

Lightfield plans to conduct additional tests to confirm ballistic tests for velocity downrange and determine the affects of the aerodynamics of wind drag. Lightfield officials, who have been testing Kiss-Cote for six months, discovered the substance when Coury was attending the Grand Prix Offshore boat races in Florida. Coury heard many of the raceboat owners were using Kiss-Cote as an undercoating to reduce boat drag. He theorized if the product worked on boats, the same principals could be applied to bullets.

Bullets reportedly exit faster, travel farther and are more accurate because of reduced wind drag, Kent says. In addition, if the substance is applied to the barrel itself, it won't corrode from gun powder use. It also acts as a rust-proofing agent if used on the gun's exterior.

"And if it works for bullets, imagine what it will do for airplanes," Kent says. "Plus, it prevents ice on the airplane's wings."

Tampa Electric has been conducting tests with Kiss-Cote for about a year. The material is expected to eliminate the growth of barnacles and algae that grow inside a power plant's pipes, thereby improving the transfer of heat. The electric company is expected to test the product another year before making its decision.

And for car owners interested in wax-perfect finishes, Kiss-Cote promises to end the drudgery of endless hours of buffing. The protective coating has a high bead content that surpasses wax. "You'll never have to wax your car again," Kent says.

The downside, however, is that once the polymer has been applied, paints and adhesives won't stick. "It lasts a long time, the lifetime of the finish it's put on," Kent says.

Privately owned Kent Integrated Scientific Systems plans to perform the R&D on additional product development. Another Kent company, called Kiss-Cote, will be responsible for production of the materials. Kent says he expects to hold an initial public offering by year end. He declined to disclose anticipated gross income from the polymer coating, but says "we're paying the bills."