

## engine & BOAT SERVICE

# POWDER COATING ISN'T JUST FOR LOOKS ANY LONGER

I MEAN COME ON; WOULDN'T YOU RATHER BE FISHING INSTEAD OF SCRAPING?

Captain Joe Ternyila

For inboard boaters, marine growth is the bane of boating. Barnacles, tube corals, and now zebra mussels pose a major threat to vital running gear, especially propellers. To address the problem, an innovative solution has recently hit the market, an epoxy based antifouling coating that has undergone years of testing in the warm, nutrient rich waters of South Florida. It is not only EPA compliant, but also purportedly contains no green house gas causing volatile organic compounds. Applied as a powder coat, it cures to a hard, ultra-slick finish that is both self-cleaning and virtually maintenance free. What more can a captain ask for.

In May of 2005, this unique powder coating was applied to one of the propellers on a Luhrs 41 ft. convertible, Office Hours, while leaving the other prop completely untreated. Over 6 months, the first thing noticed was that the Cummins electronic readout indicated a five to seven percent decrease of load on the protected prop, suggesting less hydrodynamic resistance. Interestingly, despite some erosion, electronic readouts continued to reveal less loading on the Mussel Buster coated prop throughout the entire test.

During another test that ran from November 2003 to November 2005 on the 65 ft. Hatteras, Jade, they observed the performance over a two year period. In between haul outs they photographed and videotaped the results. As reported by the Jade's captain, Tom Muer, there were only minimal cleanings, which the crew was very happy about. At the first year haul out, the captain contacted the product developer, Matrix Engineering Concept's Jack Thygesen, to assess the coatings performance. After viewing the coating's condition, Jack recommended a scuff sanding with 220 grit emery cloth to revitalize the surface of the coating. Once they splashed the boat, they began another year of monitoring its performance. With only minimal cleaning in between haul-outs, the coating once again was photographed and documented. As you can see on the adjacent page, clearly this coating inhibits the accumulation of marine organisms. At the end of the test, there was only minimal coating loss, which could have been caused by any number of reasons, the most likely being cavitation.

The innovative product we're discussing is called Mussel Buster Propeller Protection®. It's a new, recently patented, environmentally friendly, and very effective way of keeping your inboard boat's running gear in "Ready-to-Run" condition. This keeps you in your boat instead of under it, which is the goal of every boat owner. Throughout testing, Mussel Buster® has routinely experienced multi-season life cycles which match up well with some of the most effective bottom paints on the market. Because of Mussel Buster's unique technology, distinct properties and strict adherence to coating quality standards, Mussel Buster® coated propellers and hardware are unmatched in performance and durability. Since early 2000, this specialized powder coating was proven in the tidal waters of Martin, Palm Beach and Broward County,

Florida, which all boat owners know are some of the harshest waterways in the world to prove a point about anything. With South Florida's warm tropical climates, test boats were moored in some of the worst areas in the country for barnacles, tube corals, and other performance robbing marine organisms.

During the application of the Mussel Buster®, there are no volatile organic compounds, known as VOCs, emitted into the environment, unlike virtually all prior technology which often contains several pounds of VOCs that evaporate as solvents into the air, contributing to the greenhouse gas effect.

Mussel Buster® can be applied to propellers, rudders, trim tabs, suction screens, scoops, sea-chest strainers and metallic bow thruster props made from all types of materials except aluminum, fiberglass, and plastic. Mussel Buster® coated products have proven to reduce the load on your engine(s) because the finish is ultra-smooth, thus reducing frictional resistance through the water.

On top of the load reduction, Mussel Buster® is also resistant to marine organism fouling. In order to understand how Mussel Buster® works, think of your non-stick cookware, so when you get into your boat after weeks of sitting, and you push the throttles forward, nearly all the growth which has settled on the props washes completely off. A number of boat owners have reported that their boat sat for as long as three months, and they were still able to simply wash the wheels clean with nothing more than a quick run down the ICW. The following lists some of the major attributes of this extremely durable and extremely effective product.

### Applying Mussel Buster®...

- improves performance;
  - inhibiting performance robbing marine growth
  - reducing engine load
  - enhancing top speed
- saves you money;
  - insulates against electrolysis
  - reduces fuel consumption
  - extends maintenance intervals
  - virtually eliminates electrolysis erosion and corrosion
- provides ease of maintenance;
  - self-cleaning with normal operation
  - remaining fouling wipes off easily
  - extends metal and sacrificial anode life
  - reduces the need for diving services to clean running gear
  - makes cleaning bow thrusters a snap

MUSSEL BUSTER® is patented and the trademark registered by Matrix Engineering Concepts, Inc. and continues to be the only multi-

season marine running gear protection for the boat owner who is serious about performance and efficiency.

According to Jack Thygesen, they have received numerous testimonials. Here is what satisfied users are saying:

"Simply amazing, since we started using the Mussel Buster product, we literally have not had to clean our props"

"Since I began using this product a year ago, I've seen my speed increase and fuel bill decrease."

"After a year the coating looks great"

To date, more than 200 varying sets of propellers, rudders, trim tabs, bow thrusters and suction screens have been coated and tested. A high percentage of users are repeat customers, many of whom are seeing multi-season performance with only a moderate scuff sanding at haul-out to revitalize the ultra-smooth surface. The team at Matrix tell me they continue to receive numerous accolades regarding Mussel Buster's® performance. In all honesty, they say they also dealt with a few complaints regarding pattern wearing, however, these same individuals have never complained about the ability of Mussel Buster to protect their submerged hardware, under normal usage. Normal usage is defined as using the boat at least once a month. Pattern wearing is caused by hot spots and cavitation on the blade faces and hub. Powder coating will wear in these areas in some cases, and should be considered normal; however, owners have seen only insignificant fouling even on bare metal still surrounded by the coating. Mussel Buster® is not and has never been billed as "armor plating." However, Mussel Buster is, when applied correctly, an extremely tough coating that significantly reduces fouling which makes cleaning, if necessary, a snap, and keeps you in your boat rather than under it.

Finally, natural reef formations off South Florida are shedding at an alarming rate, as much as 40% over the last ten years. That's right. In only ten years, as much as 40% of the reef system has been lost, possibly forever as reported by Reef Relief. Some contributing factors are the high release of toxic materials from bottom paints, and nitrogen rich run off from farmland fertilization and live stock waste. Matrix Engineering Concepts, Inc. has no control over farm land fertilization or live stock run off, however, they do help lower toxic materials given off by fouling resistant paints to the ocean and VOCs to the air we breathe. To my knowledge, Mussel Buster® is the only propeller protection coating that has no VOCs. To that end, we hope that anyone who views this will consider all of the benefits, environmental and functional, of utilizing Mussel Buster® to protect their boats.

For more information or to locate an application specialist near you, contact;

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Captain Joe Ternyila has been fishing and boating from Maine to the Caribbean for over 30 years. Licensed to 100 tons along with a commercial towing endorsement, Capt. Joe's specialties lie in operating and maintaining inboard powered vessels ranging to well over 100 ft.



JADE WITH FRESHLY COATED PROPS, SHAFTS AND SCREWS



COATED PROP, SHAFT AND NUTS AFTER 12 MOS. OF USE



COATED PROP & RUDDER AFTER 20 MOS. OF USE



COATED PROPS READY FOR RE-INSTALL