

Rust Inhibitors: CRC Heavy Duty, Bull Frog & Lanocote Do the Job

It's been several years since we looked at rust preventatives, those coatings purported to protect marine metal surfaces against corrosion and oxidizing. Because rust is such a pervasive problem on boats, we have continued to look at various means of dealing with it, from metal polishes (February 1997) to the various penetrating/lubricating oils that we currently are testing.

In our last test of preventatives, we found a few—not many—products that worked. Since then, we've identified some newer products and also located some non-marine substances that claim to do the same job.

What We Tested

For this round, we selected several products from last time, including Boeshield T-29, which scored well, and Corrosion Block, which didn't perform all that well, but which is still being marketed aggressively to boaters. We didn't include one of our favorites from the last test, Pachmayr, because it's very difficult to find—we couldn't.

As in the previous test, our products included sprays, greases, oils, and liquids. Not included were paints or other permanent coatings, which we consider to be in a different class. We got our products from a variety of sources, including marine chandleries and discount stores, hardware and auto stores, and sporting goods shops. In all we found a dozen different brands, including nine sprays, two waxes, and one liquid.

How We Tested

To hasten the process, we chose to apply the coatings to 6-inch strips of unfinished mild steel, instead of a coated metal. We polished (buffed) the strips until shiny, and degreased

and dried them. We applied the various products strictly according to manufacturer's directions, being careful to use all new cloths and applicators to avoid cross-contamination. When alternative methods were suggested—one or two coats—we tried both. One batch of strips (generally those with a single coat), we set out in the fresh air (somewhat briny because of our proximity to salt water), where they were subject to periodic freshwater dousing; the second was affixed to a bulkhead in a nearby saltwater cove, where they were submerged twice daily during high tide.

We left our first set of strips out for two weeks, at which time most had sufficiently (completely, in some cases) rusted to separate the winners from the losers. The saltwater group stayed in for a week until we achieved the same results.

After our first round of testing, we chose several of our treatments for a third round of tests. While we had followed directions to the letter in our first applications, we suspect that the average user, in real life, would really slather the stuff on. So that's what we did this time. The three were chosen because two of them produced okay, but not superlative, results the first time and we wanted to see what a heavier coating might accomplish. The third (Boeshield T-9) was chosen because it fared less well in our testing that it had several years back.

Incidentally, for our degreasing we used Mermaids Citrus Wonder. While we haven't been overly impressed with Mermaids "natural" prod-

ucts in the past, and did not do a comparison this time, we thought the degreaser worked very well; there certainly was a lot of sludge left behind in our basin after each batch of strips had their bath.

What We Found

As with our last tests, we found that the sprays (liquid sprays in some cases) are the easiest to apply. Most came with extension tubes for precision work and hard to reach spots, and some were messier than others. The two waxes required a bit more hands-on work, but not much. And, as is the case with most things, we discovered that the thicker the coating, the better the protection generally—and the stickier the metal sprayed. So there's a trade-off between maximum protection and the comfort of handling whatever's been sprayed. Finally, we found that,

Below: Our collection of sprays, liquids, and waxes that purport to block rust and corrosion. Some did, some did not.



Performance Guide: Rust Inhibitors

Product	Type	Size (oz.)	Price	Price per Oz.	Test Results		*Overall Rating
					Freshwater	Saltwater	
Boeshield T-9	Spray	4	\$6.95	\$1.74	Fair	Poor	2
Bondo Undercoat Sealer	Spray	18	\$2.99	\$.17	--	Fair	1
Bull Frog Rust Blocker	Spray	7	\$8.99	\$1.28	Good	Excellent	3.5
Corrosion Block	Spray	12	\$14.65	\$1.22	Poor	Poor	0
CRC Corrosion Inhibitor	Spray	10	\$8.50	\$.85	Excellent	Excellent	4
Fluid Film	Spray	11.75	\$5.45	\$.46	Poor	Poor	0
Lanocote	Wax	4	\$6.45	\$1.61	Excellent	Good	3
Mariner's Choice Sea Spray	Spray	10.75	\$9.99	\$.93	Good	Fair	2.5
MDR Metal Wax	Wax	12	\$8.50	\$.71	Poor	Poor	0
MP-7	Liquid	24	\$10	\$.42	Poor	Fair	1
Permatex Silicone Spray	Spray	10.25	\$3.49	\$.34	Poor	Poor	0
Rem Oil	Spray	4	\$3.29	\$.82	Poor	--	0

*Based on a 1-4 scale with 0 = worst, 4 = best.

like last time, most of the products didn't live up to their billing—or at least our expectations. The good news is that the better products performed equally well (and the poorer equally badly) in both fresh- and saltwater segments of our trials.

Individual Evaluations

Boeshield T-9. Billed as a "corrosion shield" and waterproof lubricant, T-9 was developed by The Boeing Company for long-term protection of aircraft. It sprays on nicely and forms a thin, fairly clear coat; it's popular among plane mechanics because it doesn't run or weep—also good qualities for a boat owner. In fact, the T-9 was one of the pleasantest products to work with, going on smoothly and leaving almost no tacky surface coating. But it didn't work for us, succumbing rapidly to rust in our saltwater test. As might be expected, it held up better in the freshwater test, showing just a sprinkling of rust at first, more after about a week.

We retested the Boeshield on a third strip, applying a much thicker coating and setting it out in the fresh air (which included exposure to rain and snow). Again, it began showing signs of corrosion—albeit less than before—after little more than a week. Not the worst, but not in the superlative category either.

Bondo Undercoat Sealer. File this one under Mistake. During our check of automotive stores, we came across the Bondo product, which lists many uses, firstmost as a rust preventer. We should have paid more attention to the name—it's an undercoater—and further uses, such as sealing tree wounds and driveways. This is basically tar in a can, at least that's what it looked like; thick, black, sticky, this is not something you'd want to apply to any part of your boat. It actually did quite well as a rust preventer, except that you'd never be able to use—or touch—the object again. If it weren't for the Mermaids' degreaser, our fingers would still be stuck together.

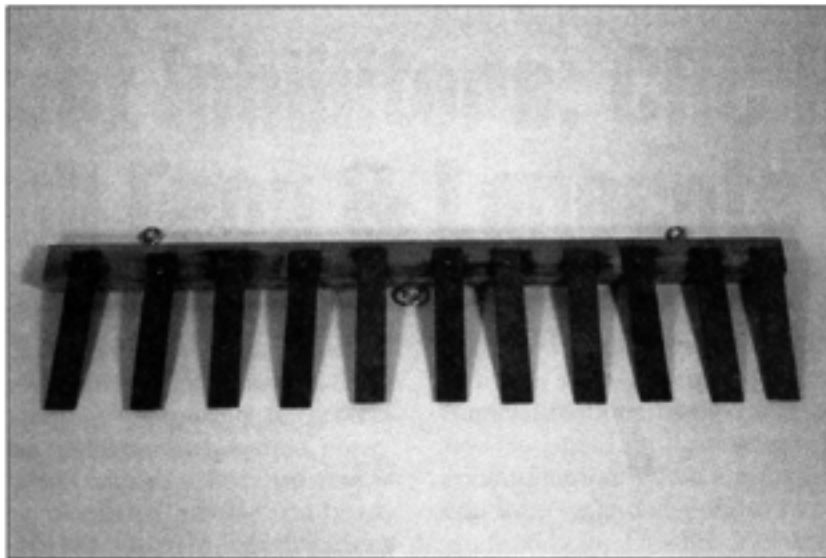
Bull Frog Rust Blocker. A new product to the marine field, Bull Frog, the manufacturer says, contains VCIs (vapor corrosion inhibitors) in a variety of mediums. The Rust Blocker spray, it is claimed, forms a molecular layer on metal that seals it against air and moisture; any area that is scratched will attract more free-floating VCIs and be resealed. Used on an industrial level to protect such things as bridges and pennies, the Bull Frog performed very well in our saltwater dousing, roughly on a par with the Lanocote, slightly below the CRC. It did well in our fresh air test, so we decided to retest it. It did much better,

but was greasier to the touch.

Corrosion Block. This marine supply store staple didn't fare that well in our original tests several years ago, but because it's so heavily marketed to boaters, we decided to try it again. Both fresh air and saltwater test strips coated with Corrosion Block quickly corroded. The spray also is touted as a penetrating oil, and we'll include it in that upcoming comparison. Among the most expensive of our test products, at \$1.22/ounce, it wouldn't be a bargain at any price—it simply didn't hold up.

CRC Heavy Duty Corrosion Inhibitor. We don't always give a vote of approval to CRC products, but this one's a winner. A foamy brownish petroleum distillate-based spray, the CRC Heavy Duty was demonstrably the best in both fresh and salt tests. Virtually perfect corrosion protection at a reasonable price. Our only gripe is in the packaging; the soft plastic cap had to be pried off with a knife. We replaced it with a harder snap-off cap from one of the ineffective sprays.

Fluid Film. A clear foamy spray, Fluid Film does not contain silicone and consists, company literature says, of thixotropic liquids (gels that liquify upon shaking, then return to a hard-



Above: Most of the sealers did not pass the saltwater phase of our testing. The CRC Heavy Duty Corrosion Inhibitor (third from right) and Bull Frog Rust Blocker (fourth from left) did.

ened state) whose "unique molecular action prevents rust before it starts..." Well, not in our tests. The Fluid Film, one of the less messy sprays, held up for more than a week in our fresh air test before subsiding into rust, and deteriorated rapidly in salt water. It, too, had a very difficult-to-remove cap.

Lanocote. One of two waxes, or pastes, we tried, this one worked. Thicker than the MDR Metal Wax, this greenish paste (developed in New Zealand) took a bit more elbow grease to apply and spread evenly, but nothing too difficult. Lanocote, as the name implies, contains lanolin, with other unspecified ingredients to stabilize the lanolin and prevent bacteria growth. It's distributed in the U.S. by Forespar Products.

Mariner's Choice Original Sea Spray. This new, to us, spray product performed fairly well, posting a distant third in our fresh air test (behind CRC and Lanocote) and so-so in our saltwater dunking—well enough, we decided, to warrant a second look. Applying a (much) thicker coat, we got proportionately better results, but also a lot more tack. Not the greatest, but much better than the worst.

MDR Metal Wax. Less than half the cost per ounce than the Lanocote paste, the petroleum-based MDR didn't work for us, producing virtually no saltwater corrosion resistance and among the worst results in the fresh air/water portion of our testing. This sweet-smelling paste is often found in marine stores. We don't recommend it.

MP-7. This new liquid product (active ingredient, phosphoric acid) is primarily a rust buster, and an excellent one at that as we wrote up in our review last November. The developer agreed that it might work as a rust inhibitor, so we gave it a try. Perhaps because it's a liquid and difficult to get to form an even coat, it didn't perform too well, although it certainly wasn't among the worst. We can't recommend it as an inhibitor, but it's still worth a try as a rust dissolver.

Permatex Silicone Spray. This spray from Loctite is primarily a lubricant but also claims anti-corrosion properties. It did not perform well in our tests. We'll try it around the house as a lubricant and auto wire protector.

Rem Oil. Developed by Remington to protect metal parts on weapons, this

was one of several similar corrosion protection products (it contains Teflon®) commonly sold in sporting goods stores. A thin oily spray, it goes on easily enough, but the strip we applied it to began showing signs of rust in our freshwater test (we didn't try it in salt) after just a few days. It was among the worst after little more than a week. Best used for its designed purpose—but not suited for the marine environment, according to our results.

Conclusions/Recommendations

CRC Heavy Duty spray was the clear winners in both fresh and salt tests, followed by Bull Frog, especially for salt water, and the Lanocote paste. The sprays get the nod for ease of application and overall performance. Also effective was Mariner's Choice Original Sea Spray—particularly for fresh water. Because the Bull Frog and Mariner's Choice seem to perform better with thicker—and stickier—coats, we'd try to use them on metal parts we wouldn't be touching often, such as trailer springs. ■

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