

# General Cleaners Challenge

*Multi-tasking sprays tested on common boat surfaces coated with boat grime and grease.*

One popular marine catalog dedicates 14 pages in its maintenance section to marine cleaners, polishes, and waxes. Within those pages exist dozens of specialty cleaners—cleaners for the bilge, nonskid, vinyl, carpet, black streaks, mildew, waterline stains. There’s even one to remove spider stains—really. Browsing the pages left us wondering, “Whatever happened to the old-fashioned all-purpose cleaner, the stuff that can tackle the majority of cleaning jobs on a boat, everything from dirt to grease to mildew?”

What if you’d rather go with one do-it-all cleaner and use some extra elbow grease if necessary instead of buying every pricey specialty cleaner on the market? As it turns out, some well-known manufacturers of specialty marine cleaners—including Star brite, Marykate, and Yacht Brite—also make products for general cleaning, so we launched a test to find the best multi-purpose cleaners on the market.

## WHAT WE TESTED

We tested a total of 15 products, a cross-section of cleaners from popular marine manufacturers; however, testers dropped one product from the review, Green Ocean Products’ Go! Multi Task Cleaner ([www.greenoceanproducts.com](http://www.greenoceanproducts.com)), because the company is coming out with an updated version of it in the near future. We’ll test it when it becomes available.

Five of the 14 test products reported on are labeled as environmentally friendly, or green. They are Shaklee Ba-



*PS testers put more than a dozen multi-purpose cleaners to work on grimy fiberglass, rubber, Formica, and vinyl surfaces to find the products tough enough to tackle most cleaning jobs and serve as the go-to cleaner.*

sic H2 Organic Super Cleaning Concentrate, Star brite SeaSafe All-Purpose Citrus Cleaner and Degreaser, Spray Nine Bio-based Earth Soap, and Biokleen All-Purpose Cleaner. None of the test products carry the U.S. Environmental Protection Agency’s Design for the Environment (DfE) logo, which *PS* uses as a benchmark for evaluating green products. Cleaners that carry the logo have undergone extensive screening by the EPA and other labs to ensure that none of their ingredients are harmful for humans or the environment.

Three of the test cleaners were concentrated formulas: Basic H2, Spray Nine Bio-based Earth Soap, and Driven Multisurface Cleaner Concentrate. Yacht Brite also is sold as a concentrate in the 1-gallon size, but we tested the 32-ounce regular formula. Two products, MDR’s Crazy Clean and Marykate’s Heavy Duty Roll Away Boat Wash, are not identified as concentrated cleaners

but require the user to wet the surface to be cleaned with water before application. Testers also included a “homebrew” cleaner for comparison: a water and white vinegar solution mixed with a 16:1 ratio.

Most of the test cleaners are sold in spray bottles ranging from 16 to 32 ounces. A couple of the concentrated ones, including the Basic H2 and Driven concentrates, are packaged in capped bottles without spray nozzles; this makes sense as users have to mix them with water in a separate bottle anyway.

Prices range from \$2.19 for a 32-ounce bottle of non-concentrated Biokleen to \$19.95 for a 16-ounce bottle of the Driven concentrate. But the majority are priced from \$6 to \$12 per container; the prices were found on the Web and are subject to change.

We’ve broken down pricing to cost-per-ounce in the Value Guide on page 14. Biokleen led the way at 12 cents per

PRODUCT	SIZE / PRICE	PRICE PER OUNCE	SURFACE TEST RATINGS				pH TEST RESULTS
			FIBERGLASS	RUBBER	VINYL	FORMICA	
NAUTICAL EASE SPRAY BOAT CLEANER	32 oz. / \$7.89	25¢	Excellent	Fair	Good	Excellent	8 / Weakly alkaline
MARYKATE HEAVY DUTY ROLL AWAY BOAT WASH#	32 oz. / \$11.81	37¢	Excellent	Fair	Good	Good	6 / Weakly acid
IMAR MULTI-PURPOSE MARINE CLEANER**	16 oz. / \$16.99	\$1.06	Excellent	Good	Good	Good	8 / Weakly alkaline
K2R SUPERSPRAY ALL SURFACE CLEANER ✓	32 oz. / \$9.99	31¢	Excellent	Excellent	Good	Fair	8 / Weakly alkaline
BASIC H2 ORGANIC SUPER CLEANING CONCENTRATE*	16 oz. / \$10.35	65¢	Excellent	Poor	Fair	Good	6 / Weakly acid
YACHT BRITE SERIOUS MARINE CLEANER	32 oz. / \$11.98	37¢	Excellent	Fair	Good	Fair	8 / Weakly alkaline
BIOKLEEN ALL-PURPOSE CLEANER ✓	32 oz. / \$3.89	12¢	Excellent	Poor	Fair	Excellent	6 / Weakly acid
STAR BRITE SUPER ORANGE ✓	16 oz. / \$8.18	51¢	Excellent	Excellent	Good	Excellent	8 / Weakly alkaline
STAR BRITE SUPER GREEN ✓	22 oz. / \$6.99	32¢	Excellent	Good	Excellent	Excellent	6 / Weakly acid
STAR BRITE SEASAFE ALL-PURPOSE CITRUS ✓	22 oz. / \$8.99	41¢	Excellent	Excellent	Good	Excellent	8 / Weakly alkaline
MARINE SPRAY NINE \$★	25 oz. / \$4.18	17¢	Excellent	Excellent	Excellent	Excellent	9 / Alkaline
MDR KRAZY CLEAN ★	24 oz. / \$6.99	33¢	Excellent	Excellent	Excellent	Excellent	6 / Weakly acid
SPRAY NINE BIO-BASED EARTH SOAP* ✓	34 oz. / \$5.99	39¢	Excellent	Fair	Good	Fair	6 / Weakly acid
DRIVEN MULTISURFACE CLEANER CONCENTRATE* ✓	16 oz. / \$19.95	39¢	Excellent	Excellent	Good	Good	8 / Weakly alkaline
VINEGAR AND WATER SOLUTION	32 oz. / \$2.19	7¢	Fair	Poor	Fair	Fair	4 / Strongly acid

★ Best Choice    ✓ Top Green Cleaner    ✓ Recommended    \$ Budget Buy    \*Concentrated; \*\*Can be diluted; #Area must be wet before cleaning

ounce, followed by Nautical Ease at 25 cents, and Spray Nine at 26 cents. Because they are meant to be diluted, the concentrated cleaners will likely last longer, making them the least expensive when fully diluted. But we're getting ahead of ourselves. The prices really come into play after the test results are in.

Testers put each cleaner through a series of bench tests simulating real-world use. Following manufacturers' instructions, testers used them to clean fiberglass, Formica, rubber, and vinyl. Read more about the tests in "How We Tested" on page 15.

To get an idea of how the multi-purpose cleaners stack up against the best specialty cleaners, we compared them to the top picks from our most recent degreasers (February 2010) and mildew removers (January 2009) tests.

A few of the multi-purpose products, including Spray Nine Earth Soap and Star brite Super Orange, were tested for both the general cleaners and degreasers articles because they claimed to be both. Top picks in the degreaser test were Krud Kutter Degreaser/Stain Remover and Marykate's Grease Away Engine Degreaser. The Budget Buy in the evaluation, Holy Cow Heavy Duty Degreaser, is no longer available, and Raymarine's Marine Shield Heavy Duty Cleaner, which we had planned to test, also has been discontinued.

PS's favorites in the 2009 liquid mildew remover test were top performer Klean-Strip, which contains bleach, and the bleach-free Nautical Ease and Spray Nine. Testers recommended Thetford's Mildew Stain Remover as the green-cleaner pick in that test.

## WHAT WE FOUND

In the fiberglass test, all of the cleaners removed the dirt, the engine grease, and the oil, and the tester gave them all an Excellent rating. The grease and grime just didn't seem to sink into the fairly new, healthy fiberglass, so they easily wiped away. The vinegar and water solution, however, had a hard time removing the grease and scored only a Fair.

The yellow rubber hose posed a much tougher challenge for the test cleaners. The standout performers in the rubber test were K2r Superspray All Surface Cleaner, Star brite's Super Orange and its Sea Safe Citrus Cleaner, Marine Spray Nine, MDR Krazy Clean, and Driven. Earning Excellent ratings, all six removed almost all the black grime and

*Continued on page 16*

## Bench Tests Put Marine Cleaners Through Their Paces

**P**ractical Sailor testers rated the ability of each cleaner to tackle dirt and grime, grease, oil, and mildew stains on fiberglass, vinyl, rubber, and Formica. Testers used a fiberglass panel (18 inches x 44 inches) from the deck of a boat as a testing platform. Because the panel was the same one used for the degreaser test, testers de-waxed the surface with an MEK solvent before sectioning it off for the multi-purpose cleaner test. Testers rubbed dirt and sand on each section, then added outboard engine grease riddled with pieces of corroded aluminum. We used a foam paint brush to smear on used engine oil, and left them outside for several days with the hope they would breed mildew.

PS used a similarly sized sheet of Formica to test the cleaners against the same type stains on the surface, which is sometimes found in galley countertops. A completely filthy, yellow compressed-air hose coated with grime served as the platform for the rubber cleaning test; the sectioned-off hose turned out to be the toughest surface the cleaners faced. For the vinyl test, PS used a 12-year-old white boat seat cushion and backrest stained with mildew. Testers sectioned them off and then dirtied them further with engine grease, oil, and dirt.

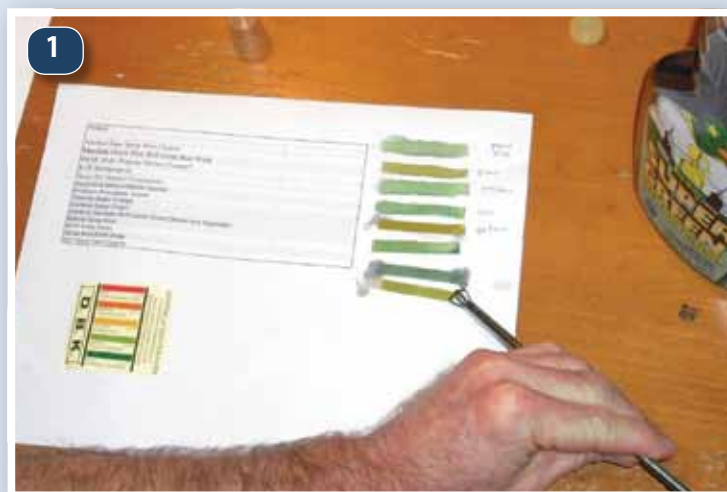
Beyond testing each product on multiple surfaces and multiple stains, PS also measured each cleaner's pH balance and chlorine levels, using color-changing indicator strips like those found in the kits used to check the water in swimming pools. The color the strips took after being dipped in the cleaners correlate to a numerical figure that is the liquid's pH level. (See results in the Value Guide on page 14.) These figures tell testers how acidic each cleaner is. When comparing equally effective products, one with a balanced pH is preferable since it is less likely to harm the surface it is cleaning. None of the cleaners tested positive for chlorine.

To further determine whether the cleaners would be safe to use on a waxed hull, testers cleaned a fiberglass panel with MEK and Daniel-San waxed on one coat of wax (West Marine Pure Oceans with PTEF). We sprayed water on the panel to be sure the entire thing beaded water and was evenly waxed before applying the test cleaners. After cleaning with the test products, testers again sprayed the panel with water and noted any differences in the water-beading ability.

Although the test products are labeled as multi-surface cleaners, they are not safe for all surfaces. A table on page 28 lists the surfaces each test product claims to safely clean, according to the makers.

In the end, all of the test performances and price were weighed as testers chose the top performer, a Budget Buy, and a top "green product."

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*The test cleaners faced a series of bench tests, including (1) pH and chlorine level testing and cleaning tests on (2) grease-covered vinyl boat cushions and (3) grime-smearred fiberglass panels.*



**MULTI-PURPOSE CLEANERS SURFACE COMPATIBILITY**

SAFE TO USE ON	FRP	PLASTIC/LEXAN	VINYL	SUNBRELLA/FABRIC	WOOD	PAINTED SURFACE	RUBBER/SS	PORCELAIN	GLASS	LCD	ALUMINUM
NAUTICAL EASE	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
MARYKATE ROLL AWAY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Dilute	Dilute	Yes	Yes
IMAR CLEANER	Yes	No	Dilute	Yes	No	Yes	Yes	Yes	No	No	No
K2R SUPERSPRAY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BASIC H2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
YACHT BRITE MARINE CLEANER	Yes	Yes	Yes	*	Sealed wood	Not flat paint	Yes	Yes	Yes	Yes	Yes
BIOKLEEN CLEANER	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STAR BRITE SUPER ORANGE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STAR BRITE SUPER GREEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STAR BRITE SEASAFE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MARINE SPRAY NINE \$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
MDR KRAZY CLEAN ★	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
SPRAY NINE EARTH SOAP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
DRIVEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
VINEGAR AND WATER	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

★ Best Choice Top Green Cleaner Recommended \$ Budget Buy

\*May remove waterproofing

Continued from page 14

restored the hose to its original color.

Good ratings went to Imar Multi-Purpose Marine Cleaner and Star brite Super Green. The two removed more than half of the black staining. The remainder of the field struggled, earning Fair and Poor ratings as they left most of the black stain on the hose. The vinegar-and-water solution also scored a Poor.

The vinyl seat cushions presented a challenge, too. Three products received Excellent ratings: Star brite Super Green, Marine Spray Nine, and MDR Krazy Clean. Testers reported that these products required little elbow grease to remove the grease. The trio left their respective sections the cleanest. Nine other products came away with Good ratings, while three test cleaners and

the vinegar-water solution were given Fairs. According to Shurhold, maker of Yacht Brite, allowing their cleaner to sit for several minutes on tough stains will pay off in less scrubbing required as it allows the cleaner to do the work rather than the person scrubbing.

In the tests on Formica, seven cleaners left their sections bright white to earn Excellent ratings. Stains remained in the sections cleaned by the K2r, Yacht Brite, Spray Nine Earth Soap, and the vinegar-and-water solution.

**pH TESTING**

When choosing a multi-purpose cleaning product, it's a good idea to look for one where the pH level is balanced so that it is an effective cleaner but isn't so strong that it will harm the surface being cleaned. This is especially impor-

tant if the surface has a sealant or wax coating.

The pH scale runs from zero to 14. The mid point of the range, 7, is considered neutral; pure water is a neutral liquid. Liquids that have a pH higher than 7 are considered to be basic, or alkaline; most hand soaps and bleach are alkaline cleaners. Basic or alkaline cleaners do well at removing oils and fats, so if you're looking to degrease your engine, try a cleaner with a high pH.

Solutions with pH levels measuring zero to 6 are considered acidic; coffee, sodas, and lemon juice are examples. Acids break down difficult stains, making them easier to remove. So if you're looking to get some rust off your deck or scrub away a waterline stain, a cleaner with a low pH will do a better job than one with a high pH. Anytime you use

## MAINTENANCE

The test field: (back row, left to right) Marine Spray Nine, Yacht Brite Serious Marine Cleaner, Basic H2, MDR Krazy Clean, Marykate Roll Away, and Driven; (front row, left to right) IMAR Multi-purpose Cleaner, Star brite Super Green, Biokleen, Star brite SeaSafe, Marine K2r, Star brite Super Orange, Nautical Ease, and Spray Nine Earth Soap.

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an acidic cleaner, however, be sure to rinse the area being cleaned with fresh water afterward.

Testers used a universal indicator testing kit to determine each test product's pH level. The same kit was used to detect chlorine in the cleaners. None of the test products showed signs of chlorine, but most of the pH levels fell in the mid range (between 6 and 8).

The kit employs paper test strips impregnated with substances that change color around specific pH values. According to our indicator, if the test strip turns blue, the test liquid is strongly alkaline and has a pH of about 11; an example of an alkaline liquid would be ammonia, which has a pH of 11.9. If the paper turns green, the test liquid is weakly alkaline and has a pH around 8 (baking soda or sea water are examples); yellow indicates a weakly acid liquid with a pH of about 6 (citrus juices); a change to orange shows a strongly acid liquid with a pH of 4 or less (sulfuric acid); and a change to red means the liquid is very strongly acid with a pH of 2 or less (battery acid).

The majority of the cleaners we tested turned their strips either yellow (pH of 6) or yellow-green (a pH of 6-8), making them weakly acidic. Marine Spray Nine came closest to turning the test strip blue, measuring a pH of 9 and making it an alkaline cleaner.

The vinegar-and-water solution showed a strongly acidic pH of 4, which was expected as it contains acetic acid. In every test, the vinegar solution lagged behind the manufactured cleaners, having particular trouble removing the grease stains. The fact that most of the test cleaners exhibited pH levels of 8 or lower, however, does help explain the results of our wax test. See below.



### WAX ON, WAX OFF

Tiny beads of water covered the fiberglass panel after we waxed it with West Marine Pure Oceans with PTEF. It was a thing of beauty, but that did not last.

The panel turned ugly after we applied the cleaners, and nary a water bead could be found. Instead, streaks of water filled the test panel, unequivocally proving that none of the test cleaners should be used on a waxed hull unless the user plans to re-wax the fiberglass.

### CONCLUSIONS

Two cleaners tested best: MDR Krazy Clean and Marine Spray Nine, *Practical Sailor's* Best Choice picks for general-purpose cleaners. For a green cleaner, we recommend Spray Nine Bio-based Earth Soap for vinyl and rubber, and to tackle Formica, we suggest Biokleen.

Marine Spray Nine showed the highest pH level and should not be used on glass or LCDs, but the product is chlorine free and has proven itself over the years in our tests. It can be found online for a good price. Regular Spray Nine is basically the same product as its marine-market sibling, but it is less expensive and can be found at stores like Ace Hardware and True Value. We found it online for \$4.18 (for a 25-ounce bottle), which equates to 17 cents per ounce, earning it the Budget Buy title.

Nautical Ease Spray Boat Cleaner also scored high in tests and carries a low price: 25 cents an ounce. Other products that scored well across the board were all three Star brite products and Driven Multisurface Cleaner Concentrate. ▲

### CONTACTS

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[www.shaklee.com](http://www.shaklee.com)

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**DRIVEN**, 800/593-2993  
[www.driventoperfection.com](http://www.driventoperfection.com)

**IMAR**, 703/330-4693  
[www.imarsales.com](http://www.imarsales.com)

**K2R**, 203/732-4479  
[www.k2rbrands.com](http://www.k2rbrands.com)

**MDR**, 973/754-7087  
[www.mdramazon.com](http://www.mdramazon.com)

**MARYKATE** (CRC Industries)  
800/556-5074,  
[www.crcindustries.com](http://www.crcindustries.com)

**NAUTICAL EASE**, 800/783-7507  
[www.nauticalease.com](http://www.nauticalease.com)

**SPRAY NINE**, 800/477-7299  
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**STAR BRITE**, 800/327-8583  
[www.starbrite.com](http://www.starbrite.com)

**YACHT BRITE**, 800/962-6241  
[www.shurhold.com](http://www.shurhold.com)