

# Practical Boat Owner®

## ANTIFOULING ON TEST

One season, 14 paints: which worked best?

## 3D SONAR

Raymarine v Lowrance

## BUYING AN OLDER BOAT

Wood or GRP?

## WEATHER

Understanding the jet stream

## ATLANTIC SINKING

Rescue and heartbreak as a reader loses his yacht

## CRUISING

Islands of Norway  
Ramsgate to Picardy

How to build a yacht in your garage

**PLUS** Make hardwood treads  
Top up a steering compass

**PROJECT BOAT**

Painting bilges  
Refinishing the mast

**LONDON BOAT SHOW**  
Map and standfinder guide inside



## 14

antifouling  
paints **PBO TESTED**

Which self-eroding antifouling paint is best? PBO compared 14 on the South Coast over a season. Ben Meakins reports

**A**ntifouling is a yearly ritual that most boat owners could do without. If scrubbing and sanding were not hard enough to begin with, there are so many antifouling products available at such a wide range of prices that it can be nigh-on impossible to know which paint to choose.

One thing boat owners tend to have in common is that we're all trying to find an antifouling which represents a good balance of cost and effectiveness.

PBO gathered together a range of 14 of the most commonly available self-eroding paints from a variety of manufacturers and put them to the test over a season.

We limited the test to single-pack, eroding paints and, where possible, requested a blue colour.

### How we tested them

We prepared our six plywood test panels – two for each of our planned test locations – by priming them with International Gelshield epoxy primer, before masking up a 7x5 grid on one surface of each.

With our 14 paints spread over each pair of panels this gave us enough room for each paint to be allocated one waterline space plus four other underwater spaces, distributed irregularly with one on each row to iron out discrepancies caused by shadows, proximity to

other paints and other factors.

Between each paint on the grid we left a 20mm unpainted border of plain epoxy primer. The reverse of each board was also plain primer to provide a control surface.

We then applied each paint, following the manufacturer's instructions to the letter, using a tie-coat primer where necessary.

We installed two of the three sets of panels on a River Hamble pontoon belonging to Southampton Solent University's Warsash Nautical College: one pair faced west (we've called them Hamble W) and the other pair faced east (Hamble E). This area sees a high tidal flow, with the spring ebb reaching 2-3 knots at times. There is also significant wave action on the panels on the west side in wind-over-tide situations, so the self-eroding properties of the paints would get ample opportunity to show their effectiveness.



The final set (Poole) we installed in Parkstone Yacht Haven in Poole Harbour. By contrast, this location has minimal tidal flow, and provided a useful comparison with the Hamble boards.

We installed the panels on 27 June 2013, and removed them on 29 October 2013. The summer proved warm with particularly bad fouling reported on the Hamble in particular.

Once the panels were removed from the water we photographed their condition, before giving each board a wipe over with a wet sponge to see how well adhered the fouling was. Finally we cleaned them up with a stiff brush and a water jet from a hose.

### What to pay

Prices shown are manufacturers' recommended retail prices for a 2.5-litre tin, where available. Chandlers engage in heavy discounting at this time of year, so it's worth shopping around for your chosen paint. For example, Hempel Tiger Xtra is currently available at £64.95 from some retailers – a saving of £35 on the recommended retail price.

**LEFT** One of the panels in situ on the Hamble pontoon



A wipe with a sponge showed how easily fouling cleared

## How to read the results

The paints were distributed on our submerged panels so that, over each set, each paint had one waterline sample and a sample on each row of the panel. Photos of these samples have been reorganised and laid out on the following pages so each panel now shows the results from each paint in each of our three test areas.

Where kelp is visible on a square, it is because it had grown on the bare primer border of the paint and couldn't easily be removed without damaging the sample panel: no kelp or long weed fronds grew on any of the antifouling paints themselves.



## FLAG Cruising Antifouling

**PRICE: £38.99 (2.5lt) • £15.60/lt**

**CONTACT: [www.flagpaints.co.uk](http://www.flagpaints.co.uk)**



FLAG's Cruising Antifouling is sold for boats capable of up to 8 knots in low fouling areas. Copper-based with no 'booster' biocides, two coats are recommended. It didn't perform particularly well in the Hamble – there was some weed attached along with a thick brown slime. In Poole it had attracted some moderate slime, which cleaned off easily with a sponge. The Hamble boards needed a stiff brush to remove the fouling.



## FLAG Performance Extra

**PRICE: £84.99 (2.5lt) • £34.00/lt**

**CONTACT: [www.flagpaints.co.uk](http://www.flagpaints.co.uk)**



FLAG's Performance Extra antifouling performed well in the fast-moving water of the Hamble, with a little brown slime present but no weed growth. It was particularly effective at the waterline. On all its sections the small amount of slime present wiped off easily with a sponge. In Poole the brown slime was thicker than in the Hamble, but again could be easily wiped off with a sponge. Two coats are recommended for a season's use.



## Jotun Yachting Mare Nostrum

**PRICE: £42 (2.5lt) • £16.80/lt**

**CONTACT: [www.smlpaintsandcoatings.co.uk](http://www.smlpaintsandcoatings.co.uk)**



Jotun Yachting's Mare Nostrum antifouling allowed the growth of thick slime in both locations, with some additional green weed growth on the Hamble boards. The Poole board's light fouling wiped off easily with a sponge but the Hamble fouling was somewhat more stubborn and needed a stiff brush to shift the mixture of slime and weed, especially on the waterline. Two coats of Mare Nostrum are advised for a season's protection.



## Jotun Yachting NonStop

**PRICE: £109.98 (2.5lt) • £44.00/lt**

**CONTACT: [www.smlpaintsandcoatings.co.uk](http://www.smlpaintsandcoatings.co.uk)**



Jotun Yachting's NonStop paint was thick to apply, with an almost 'vinyl'-like consistency. NonStop performed better than the same company's Mare Nostrum paint (left), but still attracted a layer of slime which needed a brush to shift from the Hamble boards. A sponge was sufficient to remove fouling from the Poole boards. No green weed growth was present in either location. Jotun recommends two coats for a season's use.



## Aquagard Bottom Paint

PRICE: £115 (3.8lit/1gal) • £30.26/lit

CONTACT: gc@pro-flex.net (www.aquagard.eu from Jan 1)



Aquagard is a water-based paint made in the USA and recently imported into the UK. A range of colours will be available. Application was easy – the paint is relatively thin – and brushes could be washed out in water. It performed better in the static water of Poole, with a thin layer of slime, than in the Hamble, where it grew some thick slime and minor growths of green weed which needed a quick brushing to remove. Two coats are recommended.



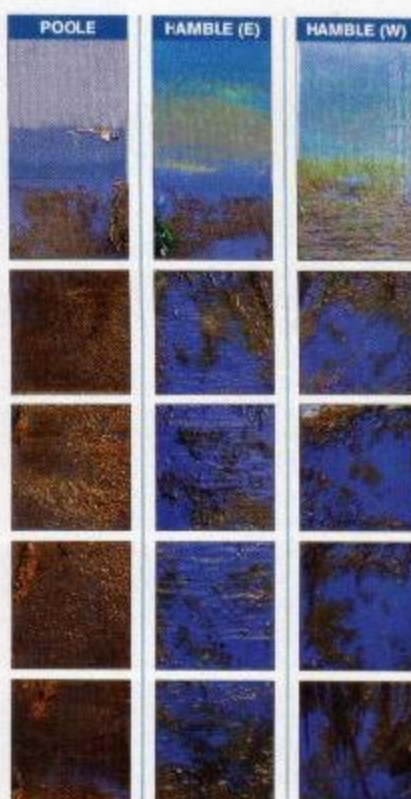
## Boero Mistral Nf

PRICE: £99.95 (2.5lit) • £39.98/lit

CONTACT: www.allboatcare.co.uk



Boero Mistral Nf antifouling, imported into the UK by All Boat Care of Southampton, performed well in the Hamble, with some slime around the edges of the panels but little in the middle. What slime there was shifted easily with a sponge. There was some green weed along the west-facing waterline panel. The paint grew more slime in the more static water of our Poole Harbour location, although still wiped off very easily with a sponge.



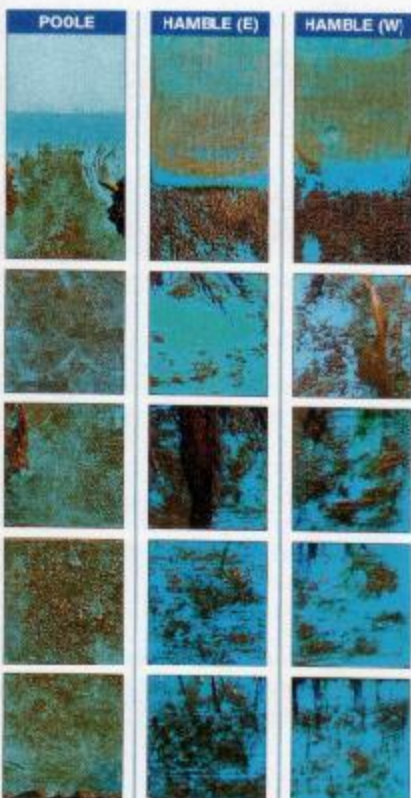
## International Cruiser UNO EU

PRICE: £69.95 (3lit) • £23.32/lit

CONTACT: www.yachtpaint.com



International's Cruiser UNO EU can, as the name suggests, be applied as just one coat for a season's use. In order to achieve the correct film thickness in a single coat, however, it is necessarily thick to apply. Cruiser UNO performed well, especially on slime, with very little slime growth in the fast-flowing Hamble water, and no green weed growth in either of our two locations. All fouling wiped off easily with a sponge on each set of boards.



## International Micron Extra 2

PRICE: £88.95 (2.5lit) • £35.98/lit

CONTACT: www.yachtpaint.com



International Paint's Micron Extra 2 was the best performer on test, with only a trace of slime on the boards in the Hamble. In Poole the slime was a little thicker but in all situations wiped off easily with a sponge. One of the panels in deeper water had no slime or fouling at all. Staining on the waterline was removed easily with a sponge. The paint was fairly thick to apply, and requires 3-4 coats to achieve the required film thickness.



## Nautix Antifouling Performer

**PRICE: £49.95 (2.5lt) • £19.98/lt**

**CONTACT: [www.nautix.co.uk](http://www.nautix.co.uk)**



Nautix's Antifouling Performer proved to work better than the company's A3 paint (right). Like the A3, it was especially effective on slime – there was very little slime build-up present at either location. There was some early-stage stubby green weed growth present on the Hamble boards, but this shifted relatively easily with a brush. It can be applied in one coat if required, and is therefore necessarily a thick paint to apply.



## Nautix A3 Antifouling

**PRICE: £95 (2.5lt) • £38.00/lt**

**CONTACT: [www.nautix.co.uk](http://www.nautix.co.uk)**



Like Nautix Performer (described left), the A3 was very effective against brown slime with very little present, but was less effective against green weed growth, which had begun to take root and required a brush to remove. There was some slime present on the Poole boards, suggesting that the fast-flowing water in the Hamble kept the slime clear. The A3 was a thin paint to apply, and two coats are recommended for a season's use.



## Hempel Cruising Performer

**PRICE: £69.95 (2.5lt) • £27.98/lt**

**CONTACT: [www.hempel.co.uk](http://www.hempel.co.uk)**



Hempel's Cruising Performer hosted a thick layer of brown slime, especially close to the waterline. But deeper in the water it performed better, and the slime on the lower test rows shifted easily with a sponge. A brush was needed for the more tenacious slime at the waterline on the Hamble boards but a sponge was sufficient in Poole. There was no green weed growth in either location. Two coats are required to attain the necessary film thickness.



## Hempel Tiger Xtra

**PRICE: £99.95 (2.5lt) • £39.98/lt**

**CONTACT: [www.hempel.co.uk](http://www.hempel.co.uk)**



Hempel's Tiger Xtra experienced some heavy slime growth, but no green weed in either location. The slime cleaned off easily with a sponge wipe on the Poole boards, but the Hamble boards needed a good stiff brushing to remove the thicker fouling, which was more firmly attached than to Hempel's Cruising Performer (left). Fouling was thicker at the waterline than deeper down. Two coats are required for a season's use.



## Seajet 034 Emperor

PRICE: £115.65 (2.5lt) • £46.26/lt

CONTACT: [www.seajetpaint.com](http://www.seajetpaint.com)



Seajet Emperor 034, compatible with aluminium as well as GRP and wooden boats, attracted some fairly thick slime in the Hamble. It shed the slime easily, however, when wiped with a sponge. There was no weed growth in either location, Emperor performed better in Poole, where there was less tidal flow. It was easy to apply, two coats are recommended, and Seajet say it should last two seasons if a third, roller coat is applied.



## Seajet 031 Samurai

PRICE: £53.50 (2.5lt) • £21.40/lt

CONTACT: [www.seajetpaint.com](http://www.seajetpaint.com)



Seajet's budget self-polishing antifouling, 031 Samurai, grew a thick layer of slime near the waterline, but it was less thick the deeper it was in the water. It grew a thicker slime in the Hamble than in Poole, but in both locations it wiped off easily with a sponge – a stiff brush being required to shift some of the Hamble waterline fouling. There was no green weed growth present in either Hamble or Poole. Two coats are recommended for a season.



## Do we need antifouling at all?



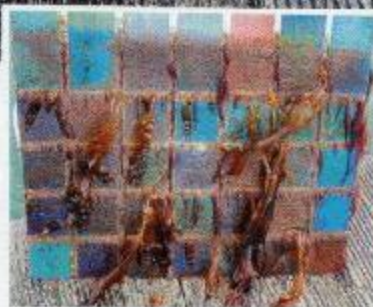
This fouling took just four months to grow on the non-antifouled side of the panel

**W**e left the reverse side of each board without antifouling, along with a 20mm border between each block of paint. These areas acted as our control samples.

The results from the back of the board show unequivocally that it is worth using some form of antifouling: the waterline was covered with a juicy green weed, calcified worm casings as well as slime and masses of sea squirts – and even a good crop of mussels – were very firmly attached to the bare epoxy primer surfaces.

On the front of the panels, dark slime and kelp had attached themselves in a grid pattern to the borders between panels. We needed a scraper and pressure washer to remove them.

Perhaps because of the close proximity of the antifouling paints, sea squirts and shellfish stayed away from the bare epoxy strips or the fronts of the boards.



Weed stuck fast to the bare primer grid between painted panels

## PBO verdict

**T**he good news is that all the paints offered an improvement compared to the areas where no antifouling was present. There was also no shell growth on any of the paints, unlike the control areas.

International's Micron Extra was the most effective paint, with only a very small amount of slime present and no weed at all. The same company's Cruiser UNO was less effective than Micron Extra, but was still a strong performer. FLAG's Performance Extra paint also performed well, as did Bocor Mistral. Nautix's paints were notably effective on slime, but less so on weed. Some paints – Seajet's Emperor and Jctun NonStop in particular – were more effective in Poole than elsewhere, which demonstrates that for different areas of the country it can pay to ask local boat owners for their recommendations.

We plan to expand our test next season to try a range of antifouling in a wider geographical spread around UK waters. If you could help us set up some test panels in your area, we'd love to hear from you. See PBO's contact details on page 5.