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12 ANTI-FOULINGS ON TEST

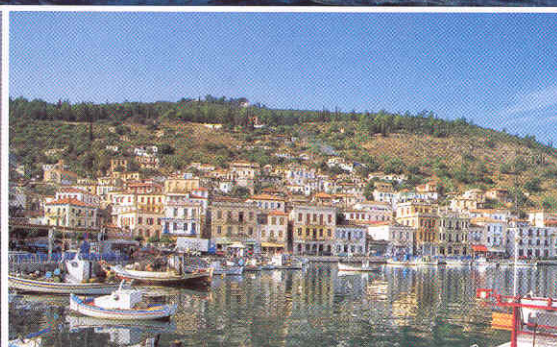
Our readers report



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NEW BOAT TEST
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ANTIFOULING

Put to the test by PBO readers

We gave a dozen readers a different brand of antifouling each and asked them how they performed over a season's sailing. **Andrew Simpson** reports on the somewhat surprising results

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which is the best antifouling? The answer, of course, is that there isn't one. With so many variables, this is probably one of the most subjective questions in the boating world.

There's simply no fair way of comparing the various products. But the experiences of a variety of yacht owners in a variety of locations, who use their boats in different ways makes interesting reading.

The majority of antifoulings fall into two general groups. The first, and most widely used, are often described as 'self-polishing' or 'erodible'. These rely on ablation – the controlled wearing away of the coating thickness to (a) dislodge organisms clinging to it and (b) to expose fresh toxins to the front line. This approach has its advantages. Firstly, because a lot of what you apply is washed away as you sail, there's much less build-up over the years. Secondly, since fouling organisms find it more difficult to get a foothold on the fragile surface, lesser amounts of biocide are needed.

The second group are 'hard' antifoulings, in which the toxins are leached from a semi-porous, non-ablative resin base. With these, successive coats will add to the coating thickness and, since the whole defence must rely on biocides, there must be rather more of them.

Testing, testing

We concentrated on erodibles, but there are some hybrid products which blur the distinction between the two.

Traditional methods of testing involve mounting immersed test panels on rafts or dangling them from pontoons. On the face of it, this might seem a reasonable enough approach, but it won't properly replicate conditions on a boat.

The problem with rafts is that they're static, typically being moored in sheltered harbours or estuaries. Granted, they do have the tide washing over them, but the



Season's start. Richard Bessell applies Plastimo 1.2 to his Sun Fizz 40, *Meltemi III*

flow across their surfaces is nothing like as vigorous as that experienced by a hull under way.

It's tempting to think that having the same conditions for all must yield valid comparisons, until you remember how the dual actions of ablation and biocide content are traded off. An antifouling that relies more on ablation than it does on biocides will be disadvantaged in a sluggish waterflow and vice-versa. Then there's the matter of locality. Raft-mounted panels only face local fouling challenges – not at all like your typical cruising boat, which is likely to encounter many as it hops from port to port.

Another testing method involves painting patches or strips of different antifoulings on the same boat. Problem gone? Not quite. The flow over a hull varies from place to place, both in its rate and charac-

teristics. The water may be laminar in some parts, turbulent in others, and nearly static in a few places shielded from the main stream. The antifouling in the bow is not living in the same world as one towards the stern; the trailing edge of a keel will see far less erosion than the leading edge. Again, direct comparisons would be questionable.

A different tack

So we've taken another tack. The measure of a product often lies in the amount of satisfaction it brings, with many factors influencing opinions.

To find out what you think, we enlisted a small band of readers on your behalf and asked each to try out an antifouling that they hadn't used before. This, then, is their story, for better or worse. Their boats varied in size and class and so did the way they were cruised. Let's see how they got on. ▢

INTERNATIONAL

Antifouling tested: International Micron Extra
Type: Erodible
RRP: £81.95/2.5lt
Boat: Sigma 36ft
Keel type: Fin keel
Mooring location: Off Rat Island, Gosport
Type of mooring: Swinging
Length of time afloat: 6 months
Previous antifoulings: Flag

'We were very impressed with the ease of the slime's removal'



CONTACT:
 International Paints
www.yachtpaint.com
 Tel: 02380 213134

BRITANNIC

Antifouling tested: Leigh's Britannic
Type: Erodible
RRP: £64.63/2.5lt
Boat: Hallberg-Rassy 34ft
Keel type: Long
Mooring location: Millbay Marina, Plymouth
Type of mooring: Marina berth
Length of time afloat: 6 months
Previous antifoulings: Unknown

'Our waterline did not grow a green beard like those of our neighbours'



CONTACT:
 Leigh's Paints
www.britannicpaints.co.uk
 Tel: 01204 556431

PLASTIMO

Antifouling tested: Plastimo
Type: Erodible
RRP: £49.95/2.5lt
Boat: Jeanneau Sun Fizz 40ft
Keel type: Fin
Mooring location: Poole Harbour
Type of mooring: Swinging
Length of time afloat: 6 months
Previous antifoulings: International Micron

'I'll use it again next year, with another product for the prop and shaft'



CONTACT:
 Plastimo UK Ltd
www.plastimo.co.uk
 Tel: 01489 778850



Meltemi III at season's end. The hull looks fouled but the slime came off with ease

International Micron Extra

■ From his Portsmouth Harbour base, Ken Frost regularly sets off into the Channel, dividing his sailing between 80% around the coast and 20% offshore.

He became well-disposed to the Micron Extra right from the start. 'Probably the easiest I've ever used,' he said, regarding its application.

After about two months he noted that some slime had appeared, which slightly discoloured *Boadicea's* hull for the rest of the season. No interim attempt was made to scrub it off, as Ken saw no reason to. Although the hull had a 'dirty appearance' and a little weed near the waterline when hauled out, the boatyard reported that they were 'very impressed with the ease of its removal.'

So, Ken and Micron Extra stay good friends, and he would recommend it to others and use it again this year.

Leigh's Britannic

■ Peter and Maggie Chennell spend almost every weekend on their boat, *Juniper*, and manage four weeks away every year for longer cruises, when they usually cross the Channel in search of the grape and other delights.

They were generally impressed with the Britannic. It went on well 'once we had the right thinners' and showed little sign of fouling during the season. Peter told us that: 'we compared our growth with our neighbours', and were pleased to see their waterlines grow green beards while ours did not.'

Hauling out at Mashford's Boatyard, they found the hull covered with a light slime. They had asked for it to be pressure washed, but the yard hands told them afterwards that an ordinary hose would have sufficed.

Peter said he would use it again, 'without a moment's hesitation'.

Plastimo 1.2

■ Richard and Pat Bessell spent about 80% of their sailing season around the coast and 20% offshore. Last year saw them cruising to the West Country, Cherbourg, and around the corner to South Brittany.

They found the Plastimo antifouling runnier than the one used the year before. 'I dripped more on the ground,' Richard said, 'though it got easier as my application technique improved!'

There were no signs of early fouling. At haul-out the hull and rudder were lightly coated with 'very thin slime' – rather better than the year before. But the prop and shaft (which he'd also antifouled) had 'lots of barnacles'. Richard believes the Plastimo product erodes more quickly than the Micron, making it less suitable for the stern gear.

He concluded by saying: 'I'll use it (the Plastimo) again next year, but I'll select another product for the prop and shaft.'

Awlgrip Gold

■ Christopher Lee bought *Fly of Beaulieu* in 2003 and abandoned his berth in Poole for the more idyllic surroundings of the Beaulieu River. His cruising was split 70% along the coast with the remaining 30% being offshore in the Channel.

The hull wasn't scrubbed during the season, nor needed to be, according to his report. Come lay-up time there was a little slime over much of the surface, all of which came away when hosed.

Christopher is an avowed enthusiast of Awlgrip antifouling so is very unlikely to change for this season. However, he admits to being 'not sure how it works on boats that spend much of their time without moving.'

Blakes Tiger Xtra

■ Bill Harris's sailing schedule is typical of many South Coast sailors. He potters about



Christopher Lee switched boats early in the season, replacing his Seeker with a Twister 28



Tiger Xtra worked well for Bill Harris in Chichester Harbour

the Solent and makes longer trips, both along the coast and across the Channel to France and the Channel Islands.

Compared to his previous Blakes antifouling, Bill found the more expensive product very easy to apply – ‘not so thick and gooey as the Tiger Cruising.’

The hull was wiped off in late June, and some small barnacles removed from the bottom half of the bilge keels, where the antifouling had been thinned taking the ground. At the end of the season there was ‘hardly any slime, but some patches of weed about an inch long, and the occasional barnacle’ – of which apparently you get a lot at Portchester. It all proved easy to remove.

Overall, he thought the Tiger Xtra an improvement over the Cruising. So, will he use it next year? ‘Definitely, yes,’ said Bill.

Professional UK Attiva

■ Although he often crosses the Channel, this year Ian Hennell stayed coastal, cruising between the Solent and the West Country. He chooses to keep his boat afloat, lifting out in the spring long enough to renew such things as anodes and – of course – antifouling.

Ian declares himself a ‘brush man’ and was particularly complimentary about how

the Attiva went on: ‘very easily, with no dragging’, as he put it.

At the time of going to press, *Sneeker* was still in her berth. He saw no visible fouling developing over the summer and he says that, even now, there’s ‘little sign of any’. A tentative scrub from the pontoon dislodged any light deposits there were.

Overall he feels satisfied with the product and would use it again or recommend it to others.

Seajet Shogun 033

■ Brian Jones cruises *Bright Water II* in the Solent and along the South Coast. He prefers to keep the boat afloat year round, drying her out between tides for a scrub-off every autumn. Last year, he applied two coats of Shogun 33 in May and beached her again in October.

In his words: ‘There was no fouling for the three months, May, June and July, but it fouled quite quickly in August and September, with weeds and gunge and some small barnacles. This is typical fouling for the Itchenor Reach.’

When it came to remove the fouling he found it ‘very hard work’. None of this sounds very complimentary until you come to the sentence: ‘In comparison with Jotun and Blakes Titan (his previous tipple) the protection was better for the first



When it came to an autumn scrub-off, Brian Jones found it very hard work

AWLGRIP

Antifouling tested: Awlgrip Gold

Type: Erodible

RRP: £88.12/2.5lt

Boat: Twister 28ft

Keel type: Long

Mooring location: Poole and Beaulieu River

Type of mooring: Marina berth and swinging

Length of time afloat: 9 months

Previous antifouling: Unknown

‘A little slime on the surface all came away when it was hosed’



CONTACT:

Marineware Ltd.
www.marineware.com
Tel: 02380 330208

BLAKES

Antifouling tested: Blakes Tiger Xtra

Type: Erodible

RRP: £59.90/2.5lt

Boat: Westerly Berwick 31ft

Keel type: Bilge keels

Mooring location: Chichester Harbour

Type of mooring: On piles (grounds at LW)

Length of time afloat: 7 months

Previous antifouling: Blakes Tiger Cruising

‘Some patches of weed which proved easy to remove’



CONTACT:

Blakes Paints
www.blakespaints.com
Tel: 01489 864440

PROFESSIONAL UK

Antifouling tested: Professional UK Attiva

Type: Erodible

RRP: £35.00/2.5lt (free delivery over £50)

Boat: Seeker 31ft

Keel type: Fin keel

Mooring location: Holes Bay, Poole

Type of mooring: Marina berth

Length of time afloat: 8 months

Previous antifouling: None, bottom epoxied

‘Went on easily with no dragging. Little sign of any fouling’



CONTACT:

MB Marine Coatings Ltd
www.mbcoatings.co.uk
Tel: 01590 681751

SEAJET

Antifouling tested: Seajet Shogun 033
Type: Erodible
RRP: £54.95/2.5lt
Boat: Sadler 29ft
Keel type: Bilge keels
Mooring location: Itchenor Reach, Chichester
Type of mooring: Swinging (touches bottom on big springs)
Length of time afloat: All year
Previous antifouling: Jotuns and Blakes

'There was no fouling for the first three months'



CONTACT:
Marine & Industrial Sealants
www.seajetpaint.com
Tel: 01692 406822

SEAJET

Antifouling tested: Seajet Shogun 037
Type: Erodible
RRP: £32.95/2.5lt
Boat: Jeanneau Sun Dream 29ft
Keel type: Lifting
Mooring location: Gareloch, off River Clyde
Type of mooring: Swinging
Length of time afloat: 7 months
Previous antifouling: Flag

'The hull washed down easily. We'll certainly be using it next season'



CONTACT:
Marine & Industrial Sealants
www.seajetpaint.com
Tel: 01692 406822

BLAKES

Antifouling tested: Blakes Cruising Performer
Type: Erodible
RRP: £39.90/2.5lt
Boat: Sadler 29ft
Keel type: Bilge keels
Mooring location: Benfleet, Essex.
Type of mooring: Trot (drying)
Length of time afloat: 6 months
Previous antifouling: International Micron

'At haul-out the hull was pretty clean. I was satisfied with its performance'



CONTACT:
Blakes Paints
www.blakespaints.com
Tel: 01489 864440

three months and about the same for the next two.'

And, as for using it again, he didn't think he could decide on just a single trial.

Seajet Shogun 037

■ Another slightly irregular entry, but certainly not an invalid one. The western coast of Scotland is warmed by the Gulf Stream so, despite its more northern latitude, it faces fouling challenges quite similar to the English Channel coast. Mussels and oysters abound in the area, which is testament to the nutrients the waters contain.

Bob and Debbie Redley cruise locally whenever they can. Last year they took in the Firth of Clyde, the Mull of Kintyre, and the islands of Muck, Eigg, Coll and Tiree.

They had no problems rolling a couple of coats over the antifouling they'd used before, nor were there any subsequent adhesion problems. Early in the season a little slime developed but it wasn't severe enough to concern them. When the boat was finally lifted out, the hull washed down easily, leaving a few barnacles in the more inaccessible places, such as behind the rudder.

They say they will certainly be using Shogun 037 next season.

Blakes Cruising Performer

■ John Feltham was the only entry on the East Coast, and something of a wildcard, as Blakes asked specifically for this product to be included. It was a condition of the trial that, in accordance with the manufacturers' recommendations, the right amount of antifouling be applied, but John found himself unexpectedly strapped for time, so he rolled on just a single coat.



Martin Hayhow had a limited season but was generally satisfied with the Flag

He found the Cruising Performer easy to apply and was satisfied with its performance. A good indicator of accumulating fouling, he told us, are the engine revs needed to motor at 4.5 knots – previously about 1,450rpm, rising slightly during the season. This year 1,350rpm throughout was all that was needed. At haul-out time there were barnacles on those parts that sank into the mud – the keels and rudder – but the rest of the hull was pretty clean.

Would he use the same product again? 'I definitely will,' he said.

Flag Flagship

■ Due to family bereavements, Martin Hayhow's plans for last season were disrupted, restricting his sailing to short trips out into the Solent and Poole Bay. For the same reasons he admits to being behind with *Grayling's* maintenance schedule.

Martin describes the application of the Flag as being 'straightforward', and there appear to have been no conflicts with the Blakes Tiger beneath.



Jane Montgomery's Sadler 25 was the only boat to use a harder antifouling

The boat is still afloat, but the water occasionally becomes clear enough to see much of the hull, and he can see no signs of significant fouling, though his log impeller (which was not antifouled) emerged encrusted with barnacles.

On the evidence so far, Martin feels encouraged enough to use the same product again.

Skipper's Line Standard

As Jane Montgomery is primarily a racing skipper, who likes to scrub off the hull during the season, this harder type of antifouling is a natural choice. She had two series victories during the season – her best results for 10 years – but is unsure whether this was down to the smoothness of the hull or her new genoa! When not racing, she cruises the coast around Poole.

The Skipper's went on easily over a coat of primer and was first scrubbed after about six weeks to remove a thin coating of brown slime. She repeated this a couple of weeks later, and on the third scrub she discovered what she describes as 'light weed' just below the waterline. When the boat was slipped for her winter lay-up, the high-pressure wash down removed any remaining fouling, leaving the bottom clean.

When asked if she would use it again, she replied: 'Yes – where can I buy it?'

Teamac

Nick Dunnett told us his first impressions of Teamac were uncertain. 'It was like



The slime on Nick Dunnett's boat looks worse than it really was. It cleaned easily.

applying thick, glutinous gloss paint,' he said. 'And the solvents seemed very strong – it irritated my eyes.'

From there on things got better. He reckons he spent 30 days cruising the coast and another 20 exploring France. The antifouling went a lighter colour and lost its sheen when immersed. There was no early fouling but, eventually, small 'slime nodules' formed on the hull. However, their grip was extremely tenuous, and they dislodged easily when the boat was sailing.

At the end of the season his opinions were unambiguous. 'The best I've experienced in 35 years.'

FLAG

Antifouling tested:	Flag
Type:	Erodible
RRP:	£39.95/2.5lt (includes delivery)
Boat:	Contessa 26ft
Keel type:	Long
Mooring location:	Port Solent
Type of mooring:	Marina berth
Length of time afloat:	Still afloat
Previous antifouling:	Blakes Tiger Cruising

'No signs of significant fouling. I'm encouraged to use the same again'



CONTACT:
C W Wastnage Ltd
www.flagfinishes.co.uk
Tel: 01621 785173

SKIPPER'S LINE

Antifouling tested:	Skipper's Line
Type:	Hard
RRP:	£58.16/2.5lt
Boat:	Sadler 25ft
Keel type:	Fin
Mooring location:	Parkstone YC, Poole
Type of mooring:	Marina berth
Length of time afloat:	4 months
Previous antifouling:	None – hull stripped

'The high-pressure wash left the bottom clean. Where can I buy it?'



CONTACT:
Skipper (UK) Ltd
www.aemmmecolori.it/skipper
Tel: 01634 815522

TEAMAC

Antifouling tested:	Teamac
Type:	Erodible
RRP:	£44.65/2.5lt
Boat:	Red Admiral 36ft
Keel type:	Fin
Mooring location:	Thorney Island Channel, Chichester
Type of mooring:	Swinging
Length of time afloat:	6 months
Previous antifouling:	Blakes Tiger Cruising

'The best I've experienced in 35 years' sailing'



CONTACT:
Teal & Mackrill Ltd
www.teamac.co.uk
Tel: 01428 320194

So, what can we learn?

Surprisingly, there was no fierce criticism of any of the antifouling products tested. Without exception, all of our testers said they would be happy to use the same product again. In fact, there was a somewhat unnerving lack of dissent. So, can we infer from this that all antifouling products offer the same, satisfactory levels of protection?

Well, yes, in some conditions. But certainly not always. All of the antifouling products covered by our trial use copper oxide powder as their primary biocide. Some contain no other active ingredients, relying upon the copper and the erodible nature of the resin base to fight off the threats. But, whereas copper is very efficient against vegetative growth and hard foulings such as barnacles, it's pathetically impotent against algae which inhabit

your boat's underwater surfaces as slime.

And 2003 was a bad year for slime – not that the little beasties themselves didn't enjoy it. Algae are organisms sort of halfway between plants and animals. They depend on photosynthesis for their growth, and last summer's wall-to-wall sunlight was just what they wanted. Needless to say, they prospered.

Until November 2002, one of the most effective defences against algal growth had been Irgarol 1051, which was banned for health reasons along with Diuron. Since then, the race has been on to find friendlier substitutes. And these don't come cheap.

So there really is a difference between the less expensive antifouling products and those that make you wince. At the more expensive end

of the market are sophisticated concoctions that are boosted with added biocides to widen their efficacy across a wider range of organisms – of which over 4,000 have been identified!

The cheaper products might be fine against weed and barnacles, but you'll need the full armoury if you want to keep slime under control.

A few final words of caution. There are so many variables in this field that direct comparisons can be invidious. In my own home port of Poole, there are different fouling conditions in different parts of the harbour. So, to take any small sample of experiences and extend it to absolute conclusions would be to mislead.

But it doesn't hurt seeing how they fared, does it?