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MOTOR BOATSTM MONTHLY

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Antifouling test



Don't paint your boat until you've read which of these work best!

Weedkillers!



Using the most effective antifouling will save you money, but which of the many paints available really gives the best results? To find out once and for all, we decided to coat the hull of our own boat with a rainbow of 11 different biocides, and leave them to battle the barnacles for a whole season. Here's how they coped.

REPORT BY MARK TURLEY

Antifouling your hull is a thankless task. It needs doing every year, and it invariably seems to take more time and cost more money than you had budgeted for. Worst of all, all your hard work literally disappears from view as soon as you put your boat back in the water!

However, try to skip a season, or eke out the periods between fresh applications, and you will

soon regret it. You're asking for a noticeable drop in the boat's performance and fuel efficiency once living organisms start to colonise the hull, and you're giving yourself a harder job of cleaning and repainting the bottom when you do eventually bite the bullet.

The fact that antifouling is a chore is all the more reason to make sure you get good results from it. And the fact that there

are massive disparities in the price of these paints (with some products costing almost three times the price of others) makes it all the more necessary to understand what you are getting for your money.

So which products are most effective at keeping weed and barnacles at bay, and which offer the best value for money?

In an attempt to find out, we gave our Sealine F37 a very

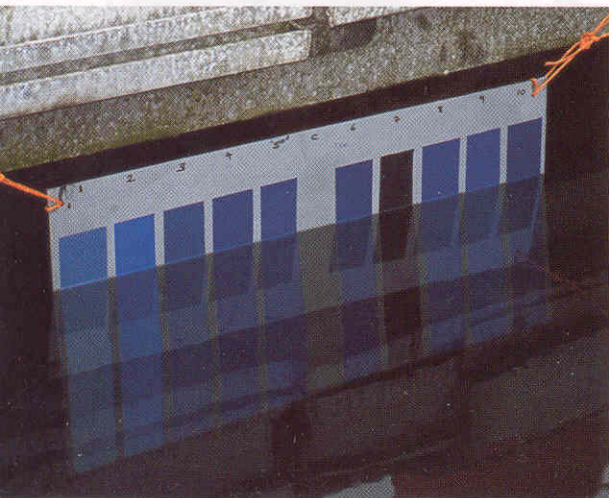
fetching striped underwater colour scheme...

SIX-MONTH TEST

At the beginning of last season we gathered a selection of antifoulings which should be suitable for our boat and its usage. These numbered 11 in all, from eight different manufacturers.

We then decorated the underside of *Calm Voyager*

below We immersed antifouled Perspex panels at several sites, as well as painting a waterline-to-keel stripe of each product on our Sealine F37.





which type?

The majority of antifoulings are one of three types: 'soft' (or traditional), 'hard' and 'erodible' (or self-polishing).

SOFT ANTIFOULINGS

These are relatively low-tech paints, often most suitable for displacement vessels.

The active ingredient, mainly cuprous oxide, is suspended in a paint matrix which allows it to leach out over time, leaving an empty honeycomb coating which needs to be scraped off once every few years.

This traditional type of antifouling has largely been superseded by the new paint technologies that have become available in recent years, which offer better solutions for planing craft.

HARD ANTIFOULINGS

These work on the principle of 'contact leaching'. Their binding agent is insoluble and only the closely packed active ingredients dissolve; the idea is that, on particularly fast craft, the paint surface will not be washed off too quickly.

Among the advantages are that on racing boats these coatings can be polished to give a smoother hull surface, and on cruisers which dry out at low water they tend not to abrade as easily as softer antifoulings.

The downside is that, unless you abrade the coating mid-season, its performance can drop off due to the build-up of the non-soluble part of the paint reducing the leaching rate of the biocide.

ERODIBLE ANTIFOULINGS

Erodible products are those where the paint surface adjacent to the water dissolves fully, continually exposing a fresh layer of biocide.

They do not need abrading mid-season, and a further bonus is that there is little build-up of paint on the hull from season to season, as most of it wears off. This makes repainting that much easier.

Most manufacturers reckon that their 'self-polishing' antifoulings are good for boats up to around 25 knots. Above this speed, the paint can be worn away quite quickly by water abrasion, although this might not be too much of a problem for a vessel which gets limited use.

amidships with a stripe of each paint running from the waterline down to the hull bottom (with an inch gap between samples), plus a 'control' panel coated with nothing more than the base coat primer.

Each of the antifoulings was applied in early May, and in accordance with the manufacturers' instructions, with two coats giving a 'dry-coat' thickness in the order of 80-100 microns.

During the makeover we took careful note of how easy each paint was to apply; where the paint goes on quite thinly, it is less easy to obtain a suitable thickness than it is with those which are more viscous.

In a separate test to compare how our test samples would fare in different water conditions, we also painted bands of them on

pieces of primed Perspex sheet, and left them immersed at Brixham Marina in Devon and at Lymington Yacht Haven in the Solent (we also rigged one in the muddier waters of the Essex estuaries, but sadly this did not survive the season).

Over the season, *Calm Voyager* clocked up some 200 engine hours (covering nearly 2000 miles), which is four times the average for a motor cruiser.

The panels were also permanently immersed for a season, but in a static state, with limited movement of water around them.

In November, the boat was lifted and the Perspex panels were retrieved for inspection. Each individual band of paint was inspected for the amount and type of fouling that had adhered to it over the previous six months.

making a choice

Most boatowners now choose either hard or erodible antifoulings (see right).

Which one is best for you may depend on how you use your boat: whether you require the slipperiest of burnished surfaces to reduce high-speed drag, or a low-maintenance coating that will give protection from one year's end to the next.

The 25-knot watershed at which erodible paints become less effective makes the decision a little tricky for some owners, whose boats may be capable of pushing up to 30 knots or more, but have a comfortable cruising speed back in the mid-20s.

We found ourselves in just this predicament with our Sealine F37, but concluded that an erodible coating was the way to go. The boat gets higher than average usage for a motor cruiser, but we are never stingy when applying the paint.



above The unprotected 'control' strip, badly fouled by season's end.

painting tips



- If no antifouling has been applied to the hull before, it will need to be 'keyed'. Sand it with wet-and-dry paper and coat it with a primer.
- On a hull which has been antifouled previously, ensure the new paint is compatible with the old one, or apply a barrier coat. Ensure the substrate is not flaking; do not dry-sand it.
- Check the minimum period you need to leave between coats, and minimum or maximum time the boat should be left out of the water between painting and relaunching.
- Keep cans of paint indoors until you need them. The paint will be easier to apply if it is not too cold.
- Use a good quality masking tape to mask off the waterline. A cheaper one could allow paint to creep underneath for a messy finish, and might not peel off cleanly.
- Choose a dry day for painting. A damp atmosphere can adversely effect adhesion.
- Stir the paint thoroughly.
- Use either a brush or a roller to apply it, but not too large a roller. A short mohair one is ideal.
- Work the brush or roller in a criss-cross pattern, and don't spread the paint too thinly. Apply an extra coat to all leading and trailing edges, such as the waterline and bow.
- Do not paint over anodes or transducers.



Awlgrip Gold Label

£88.00 per 2.5lt

Type Self-polishing antifouling, with the claimed advantage that the more you apply, the longer the boat can go between recoats.
Application Fair consistency to work with, and good coverage.
Time between coats Minimum 5 hours.
Time before launch Unspecified.
Hull performance No evidence of any weed at the waterline but heavy slime, with a much lighter film past the chine.
Panel performance Heavy build-up of fur-like weed in Brixham. A reasonable coating of slime in the Solent.
Enquiries Marineware. Tel: 023 8033 0208. www.uspaint.com

MBM ratings

PERFORMANCE	✓✓✓✓✓
VALUE FOR MONEY	✓✓✓✓✓
OVERALL	✓✓✓



Blakes Hard Racing

£84.90 per 2.5lt

Type Hard antifouling, aimed largely at powerboats and craft kept on drying moorings.
Application Thin consistency, but goes on easily to give a decent coating.
Time between coats Minimum 5 hours.
Time before launch Maximum 3 months.
Hull performance A build-up of heavy slime around the waterline, but no weed at all. Underwater vee sections suffered just light slime.
Panel performance A light film of slime in Brixham and the Solent.
Enquiries Blakes Paints. Tel: 01489 864440. www.blakespaints.com

MBM ratings

PERFORMANCE	✓✓✓✓✓
VALUE FOR MONEY	✓✓✓✓✓
OVERALL	✓✓✓



Blakes Ocean Performer

£79.90 per 2.5lt

Type Self-eroding, two-component antifouling.
Application The smaller of two tins contains a 'booster additive'; once mixed in, this needs to be used within 48 hours. The mixture is runny, but covers well.
Time between coats Minimum 5 hours.
Time before launch Maximum 2 months.
Hull performance No weed at all, just a build-up of slime around the waterline thinning to a light film underneath.
Panel performance The bare minimum of slime in Brixham and the Solent.
Enquiries Blakes Paints. Tel: 01489 864440. www.blakespaints.com

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how much paint?

According to the manufacturers, the most likely reason why an antifouling might underperform is that the boatowner applies it too thinly, or skips a coat, so that the biocide is exhausted early.

Clearly, to make sure you have the right amount of paint, it is important to be able to assess the underwater area of a motorboat hull. Preferably, you want to do so in square meters (rather than square feet), because most coverage rates are quoted in this way.

FORMULAIC ANSWER

The formula for doing so is waterline length x (beam + draught) x 0.85.

For example, *Calm Voyager* has a waterline length of about 32ft (9.7m), a beam of about 12ft (3.7m) and a draught of around 3ft (0.9m). So the area that needs antifouling works out to 9.7 x (3.7 + 0.9) x 0.85 = about 38m².

The coverage rates of different paints average out at around 9m²/litre, so each coat will require 38 ÷ 9 = 4.2lt. And remember that, in most instances, two

coats are required, so the total quantity we need is 4.2 x 2 = 8.4lt.

SHORT ANSWER

As a rougher guide, assuming two coats are required, you could use the following:

- 20ft (6m) boat → 3.5lt of paint
- 25ft (7.5m) boat → 4lt of paint
- 28ft (8.5m) boat → 6lt of paint
- 33ft (10m) boat → 8lt of paint
- 38ft (11.5m) boat → 10lt of paint
- 43ft (13m) boat → 13lt of paint
- 48ft (14.5m) boat → 15lt of paint



Flag Flagship

£39.39 per 2.5lt

Type Conventional antifouling from a low-cost, one-product brand.

Application A good, thick consistency, and it slaps on easily.

Time between coats Minimum 6 hours.

Time before launch Maximum 2 months.

Hull performance A thick coating of slime around the waterline but only a light one underneath.

Panel performance A build-up of a fur-type weed in Brixham, but only light slime in the Solent.

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



International Cruiser Uno

£63.95 per 3.0lt

Type Self-polishing antifouling, claimed to give a season's usage for just a single coat.

Application A good consistency to work with. Needing only one coat halves the painting time.

Time between coats Minimum 10 hours.

Time before launch Maximum 3 months.

Hull performance Little if any weed, just a heavy slime around the waterline and nothing much underneath.

Panel performance Slight furring in Brixham. A light slime in the Solent.

Enquiries International Coatings. Tel: 023 8022 6722. www.yachtpaint.com



Interspeed Ultra

£87.95 per 2.5lt

Type Hard antifouling, heavyweight and containing Teflon for easier cleaning, aimed at high-speed craft.

Application An easy consistency to work with, and covers well.

Time between coats Minimum 10 hours.

Time before launch Maximum 3 months.

Hull performance Waterline covered with a medium dose of slime but little else. Light slime only between chine and keel.

Panel performance A light coating of fur in Brixham, and just a light slime in the Solent.

Enquiries International Coatings. Tel: 023 8022 6722. www.yachtpaint.com



Jotun Mare Nostrum

£65.06 per 2.5lt

Type Self-eroding antifouling, apparently aimed largely at commercial users.

Application Quite a thin paint, but nevertheless quite easy to apply, giving good coverage.

Time between coats Minimum 8 hours.

Time before launch Minimum 12 hours.

Hull performance Barely any slime at all under the surface, although the waterline was thickly coated.

Panel performance Some furring in Brixham, hardly anything in the Solent.

Enquiries Jotun Paints. Tel: 020 7481 2741. www.jotun.com

MBM ratings

PERFORMANCE	✓✓✓✓✓
VALUE FOR MONEY	✓✓✓✓✓
OVERALL	✓✓✓✓✓

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VALUE FOR MONEY	✓✓✓✓✓
OVERALL	✓✓✓✓✓





Jotun Supertropic

£34.14 per 2.5lt

Type 'Conventional' antifouling, according to the sales literature.

Application Relatively thick consistency makes it easy to get a good coating on the hull.

Time between coats

Minimum 8 hours.

Time before launch

Maximum 2 weeks.

Hull performance The waterline showed the beginnings of some weed growth, building on a light film of slime. Underneath, the slime was patchy and light.

Panel performance Fur-type weed in Brixham, just a light to medium slime in the Solent.

Enquiries Jotun Paints.

Tel: 020 7481 2741.

www.jotun.com



Plastimo 1.3

£54.95 per 2.5lt

Type Hard antifouling containing PTFE, claimed to give a smoother finish to improve hull efficiency.

Application Relatively runny, but covers well.

Time between coats

Minimum 5 hours.

Time before launch

Maximum 6 months.

Hull performance Some weed around the waterline, but just a light slime on the vee-section of the hull.

Panel performance A medium weight of slime, but little else, in both Brixham and the Solent.

Enquiries Plastimo UK.

Tel: 0870 751 4666.

www.plastimo.co.uk



Seajet Shogun

£54.95 per 2.5lt

Type Self-polishing antifouling claimed to be good for 40 knots.

Two coats last two seasons.

Application Runny even when mixed well, so care is needed to ensure a good coating.

Time between coats

Minimum 5 hours.

Time before launch

No restriction.

Hull performance A light gathering of weed at the waterline, but only a thin film of slime on the underside.

Panel performance Some furring in Brixham, and a modest slime in the Solent.

Enquiries Marine Industrial.

Tel: 01692 406822.

www.seajetpaint.com



XM 4000

£54.95 per 2.5lt

Type Hard antifouling intended for powerboats.

Application Relatively thick paint which gives good coverage.

Time between coats

Minimum 8 hours.

Time before launch

Maximum 3 months.

Hull performance Underwater there was just patchy medium to thick slime, while the waterline had the onset of light weed.

Panel performance Light weed both in Brixham and the Solent.

Enquiries Plastimo UK.

Tel: 0870 751 4666.

www.plastimo.co.uk

MBM ratings

PERFORMANCE ✓✓✓✓✓

VALUE FOR MONEY ✓✓✓✓✓

OVERALL ✓✓✓

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OVERALL ✓✓✓

MBM ratings

PERFORMANCE ✓✓✓✓✓

VALUE FOR MONEY ✓✓✓✓✓

OVERALL ✓✓✓

Verdict

Overall, we were impressed by what our test samples achieved over a six-month period. There was limited fouling across the board, while our unpainted control strips were heavily colonised.

There was little disparity between the brands, but we can pick out some star performers.

Blakes Ocean Performer gave marginally the best result, but

then you pay a premium for it.

Jotun's Mare Nostrum did almost as good a job, for a rather cheaper price. And if your budget is really tight, Flag's Flagship does an adequate job at a bargain-basement price.

But the paint which gave the best combination of both performance and value was International's Cruiser Uno. Not only do you get 3.0lt in a tin rather than the usual 2.5lt, but you can get away with applying just one good, thick coat.

