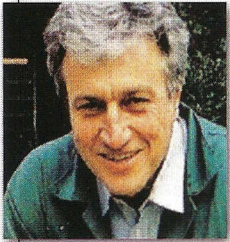
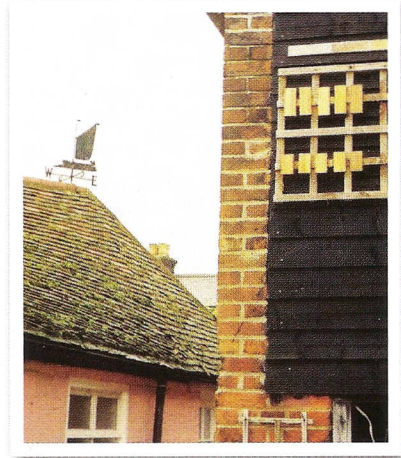


Performing SEALS



Richard Hare launches our second long-term exterior woodfinish test, introducing some distinctly different market entrants and reporting on their first six months



Armed with the performance benchmarks for the various generic types of exterior woodfinish on the market derived from the first 4½ year phase of our test programme (see last month's CB) we're in a position to evaluate some others.

We've now begun the second phase and it'll be interesting to see whether the results support or contradict those we've observed so far.

We have four new entrants, plus teak oil, and they went up on the test rig in early May last year, just as the others did over four years previously. With almost continual rain during high summer – when UV should have been attacking our test pieces – they've got off to a light start.

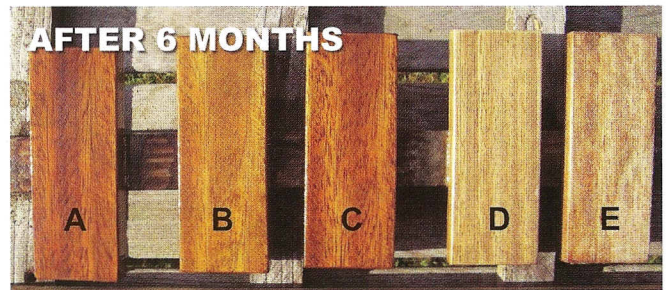
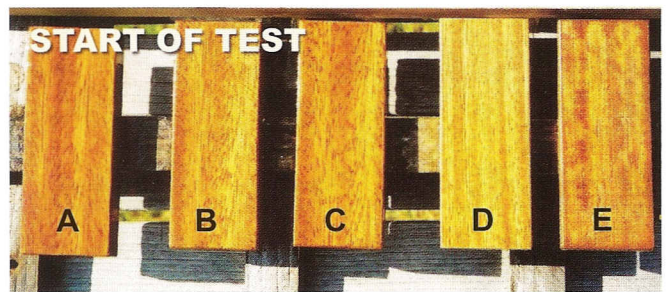
The new products

The newcomers are UV-Tech (a two-tin varnish), Blakes Classic (a conventional single-pot varnish), Blakes Seatech (a water-based varnish) and Uroxsys, a new microporous flexible polyurethane from New Zealand that we expect to perform similarly to Coelan, one of the stand-out products of our previous test, as well

as in the supplementary Mediterranean trials. The Blakes Classic (aka Hempel) conventional varnish was also tested in the Med, the results of which were published in CB226 – so it'll be interesting to see how it fares against the three conventional varnishes already assessed in Phase 1, not to mention Blakes' own water-based gloss varnish, Seatech.

Indeed, will Uroxsys perform as well as Coelan? And how well will UV-Tech compare to Dek's Olje?

We're re-visiting oils too with Topps, an off-the-shelf builders' merchant teak oil. How will it compare against a marine market dedicated oil?



The five candidates: from left, A, UV-Tech; B, Uroxsys; C, Blakes Classic; D, Blakes Seatech; E, Topps teak oil

Test rig rules: the 18-month trial

A 'pass' product is one that maintains its integrity for more than 18 months, the reason being that this sits comfortably with the 12-month maintenance cycle.

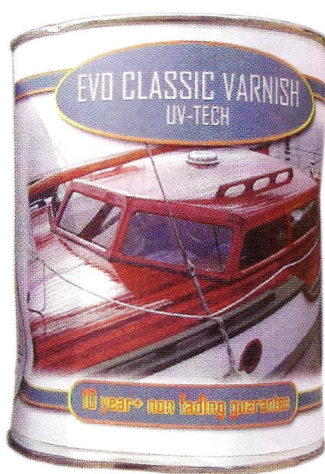
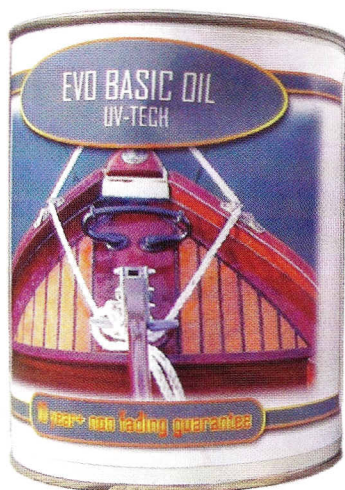
Failure is deemed to be when the film becomes detached and/or bare wood is exposed. In other words, serious remedial action is needed imminently. This applies as much to the end-grain as to the surface. Hairline cracks along the very sharp upper corner have been allowed so long as they do not affect the quality of the surrounding finish, or its adhesion to the substrate. We

allow this relaxation for practical reasons – a sharp corner would not be found on a properly shaped wood component aboard a boat. Hence we consider it unfair to use it as a stick to prod an otherwise good product into the abyss. That said, it has served us well in Phase 1 of our test program to sort the more flexible products from the more brittle ones.

Oil type products are included for comparison, but are not expected to meet this criterion. They tend to survive only a few months and need regular re-dressing.

PRODUCT	TECHNICAL DESCRIPTION	COATS (1)	AREA (2)	COST per litre (3)	COST per m ²	DAYS TO APPLY	RESULTS 6 MTHS
TWO-POT VARNISH							
A UV-TECH (4)	Alkyd-based + tung oil & others	Evo Oil: 19 Varnish: 6	19 15	£18 £24	£14.20 £9.60	10	PASS
FLEXIBLE POLYURETHANE							
B UROXSYS	Aliphatic flexible PU	5	8	£30	£18.75	2	PASS
SINGLE-POT VARNISH							
C BLAKES (HEMPEL) CLASSIC	Oil-based, alkyd varnish	5	19	£21	£5.53	5	PASS
D BLAKES SEATECH	Waterborne polyurethane	5	12	£24	£10	2	PASS
OIL							
E TOPP'S TEAK OIL	Believed to be linseed oil	3	12	£12	£3	3	FAIL

(1) Primer(s) included where applicable.
 (2) Claimed m²/litre on single-coat basis. with the exception of UV-tech.
 (3) 2007 basis.
 (4) Claimed Evo Oil coverage is 0.5-2.0l/m² which on average works out at 1.25l/m² or 0.8m²/lt; Evo Classic Varnish is claimed to be 200ml/m² which works out at 5m²/lt. This is based on a fully built-up system, not on a single-coat basis. Since we don't know how many oil dressings were involved we opted to apply UV-Tech using the same schedule as we did for Dek's Olje in Phase 1, thereby delivering a meaningful comparison. It may mean that we applied fewer coats overall .



A UV-TECH
UV-Tech is a two-tin combination oil/varnish product from Denmark.

Available direct from the manufacturer (www.uv-tech.net), UV-Tech comprises a 'saturating' oil base coat with a varnish topcoat. The company claims to achieve 10-years of non-yellowing and fading so long as the surface is maintained annually.

In common with some other products, we are warned against applying the varnish in direct sunlight, a curious caution since most of us have no alternative but to do exactly that.

Since the coverage instructions are a little vague (see below), we've applied the same schedule that we previously used for Dek's

Olje, a product against which UV-Tech might reasonably be compared.

Application notes: 15 dressings of Evo Basic Oil were applied at roughly two-hour intervals. No clear instructions are given on how many applications are needed other than 10-30 dressings. Basically, if we keep slapping it on wet-on-wet until the wood becomes 'saturated' or, in reality, a definite film develops, we've kept our side of the bargain. Given Dek's Olje's application recommendations, and our desire to make a fair comparison, we opted for 15 dressings at roughly 1-2 hour intervals, night-time excluded. Our application spanned three days.

The resulting film was allowed to cure completely over three days, whereupon it

was given a light de-nibbing with 120-grit paper, wetted with Evo Basic Oil.

UV-Tech states that on virtually impermeable species like teak and iroko 15 dressings ought to be fine but about 30 – or more – should be applied on 'absorbent' species like khaya. Given what we've learned to date we challenge the need for these extra doses. That oil is expensive stuff!

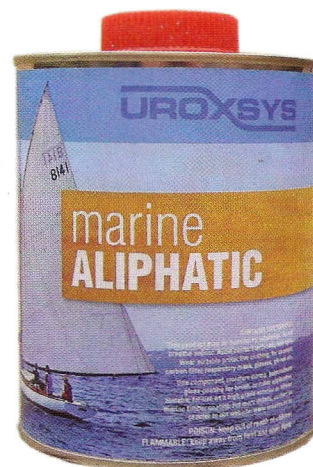
Given the performance of the two 'penetrating' oils in Phase 1 of the test programme the khaya test pieces performed fractionally better than the iroko with identical application schedules.

After leaving the lightly abraded and well oiled surface overnight – or however long it takes to dry to a satin finish – we moved on to stage two, the top coat system, of which we applied six coats, one per day.

The 21-coat application took 10 days.

Recommended ongoing maintenance: Two coats for the two subsequent years and one thereafter. Light sanding beforehand.

Performance after six months: Totally intact on surface and all four edges. It retains a high gloss and has darkened slightly to a rich nutty colour.



B UROXSYS MARINE
Aliphatic flexible polyurethane

This single-product system appears similar to the two-product Coelan and is also claimed to combine superior flexibility with the appearance of varnish and the microporous benefits of exterior woodstain.

Unlike Coelan, a dedicated primer product was not available in time for this test although its availability is imminent. We may test the 'two-product' version of the system in a Phase 3, probably next year. It is claimed the primer improves the system considerably and reported experiences of using Coelan with and without its primer would seem to confirm this. It comes with

special Uroxsys cleaner for brushes but we're told that if we can't get hold of it then No 3 thinners (antifouling) with 10% methylated spirit added should do the trick.

The manufacturer is emphatic that we should not thin Uroxsys because it's already at the correct viscosity. If we do – and they may be able to tell – we'll be 'whistling in the wind' if we complain that it doesn't do what it says on the tin. Further, they're at pains to point out that the varnish must not be thinned, or come into any contact with the brush thinners or the cure will be halted. We tried it – it was.

Pot-life needs special care as PUs are moisture curing. The trick is to minimise moisture exposure within the tin. This, the manufacturer claims, is best achieved by keeping the lid on the product between decants and not returning excess product to the tin. For storage, they recommend wiping the thread before replacing the lid and briefly up-ending the tin to create an airtight seal.

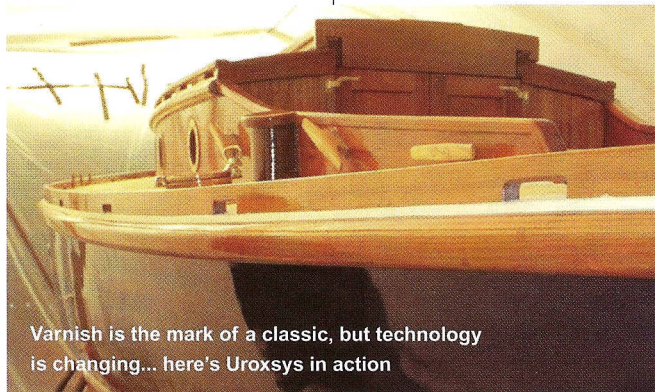
Some Coelan users zap the inside of the tin with a warm air gun before slamming the lid shut. The Uroxsys manufacturer is uneasy about this with its own product.

Application notes: Oily species must be degreased but no solvent must remain when application commences. If using cellulose spirit allow one hour for it to clear.

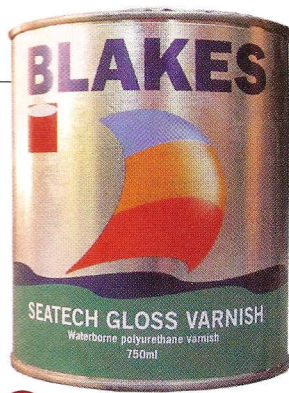
Since the product is moisture curing, decant small quantities into a pot, for 30 minutes' use. Five coats are required; it can be applied at 2-3 hour intervals so the system can possibly be built up in a single day.

Sanding between coats is recommended for defects or if the interval is more than 24 hours – essential if over 48 hours. We applied it at about three-hour intervals over two days, de-nibbing just the third coat to level it. It was all that was needed.

Performance after six months: Totally intact on surface and all four edges. It retains a high gloss and has darkened slightly to a rich nutty colour.



Varnish is the mark of a classic, but technology is changing... here's Uroxsys in action



D BLAKES SEATECH

Water-based gloss varnish

We're accustomed to hardwearing water-based flooring varnishes and all credit to Blakes for formulating one for the marine market. Water is simply the 'carrier', as solvent is for conventional varnishes. It's what's left behind after the carrier has blown off that matters.

We're all being encouraged to use water-based woodfinishes now, for good reasons. Here, though,

the combination of Seatech's marginally higher cost per litre and significantly lower coverage rates means that it works out at almost twice the cost to apply as its solvent-based sister-product.

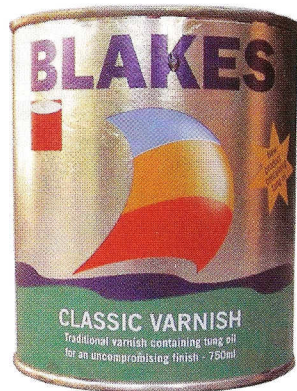
Seatech is described as a 'waterborne polyurethane varnish' offering a durable high gloss clear finish with high resistance to saltwater and UV damage.' It isn't often that a product claims salt resistance – maybe one to line up for a future Med test?

Notably different from its solvent-based sister product, Seatech has a coverage of 12m²/lt. But the big attention-grabber is the drying time – re-coating at 2-4 hours, dependant on temperature. Compare that to an oil-based re-coating schedule of 1-2 days. It could get you back in the water weeks earlier.

Application notes: We applied five coats with the first thinned 30 per cent with water. No sanding is recommended between coats, and we found no need to. It levels beautifully.

The five-coat application spanned two days but could easily have been done in one.

Performance after six months: Totally intact on surface and all four edges. It has not darkened and is almost clear. It has retained a moderate to high gloss.



G BLAKES CLASSIC

Conventional alkyd and tung oil-based varnish.

Coverage is 19m²/lt, a claimed coverage rate that exceeds the average of the

three other one-pot alkyd varnishes tested so far. It is very similar – probably the same – to the Hempel varnish we have used in the Mediterranean test.

Application notes: Five coats were applied, the first thinned about 30 per cent with white spirit. The second coat was given a light de-nibbing with 400-grade paper.

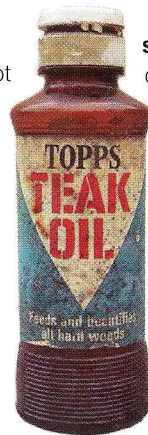
The five-coat application took five days (compared to two days for Seatech).

Performance after six months: Totally intact on surface and all four edges. It retains a high gloss and has darkened slightly to a rich nutty colour.

E Teak oil

Just because oils cannot meet our test criterion (18 months without maintenance), they should not be disregarded. Their ease of maintenance and low cost make them practical for flat surfaces like decking and cockpit soles – and since it's an easy job to whip round with a rag a couple of times a season they work well for high-abrasion areas like toe rails and rubbing strakes.

Application notes: Three straightforward dressings were applied, one a day.



Performance after six months: A very frail covering remains; the wood has just begun to show signs of weathering grey. Ideally, it needed re-dressing after three months although oils are effective even once the wood has begun to grey.

It has performed as well as the dedicated marine product in

Phase 1; cost is similar though application was simpler. Of the three hardware products available we selected Topp's, solely because it was the thickest. It smells exactly like linseed oil. 