

# COELAN

# Applied science



Coelan has gained a reputation as a wonderstuff – like varnish only more durable and more protective. Susan Smillie gives a step-by-step report on how she applied it to her 70-year-old teak decks

I can pinpoint the exact moment we decided to put Coelan protective coating on our boat decks: it was in the middle of the night when I was roused from sleep by icy rainwater on my face. We live on a 47ft ketch-rigged twin-screw motor yacht, built in 1936. Her hull is pitch pine and she has a teak deck laid straight onto oak frames; inevitably, there are leaks.

Naturally, over the years, we had tried – and failed – to solve those leaks, but they were steadily worsening and we'd discovered rot in a few places. The crux of the problem – the leaks – had to be solved to prevent any further rot.

Conversations with other boat owners and on internet forums had convinced us that this was a problem which could only be overcome with the use of the harshest of substances: epoxy or fibreglass. The

*“This seemed the answer to our prayers”*



thought of so much as paint on our beautiful old teak decks sent a shudder down my spine.

And then I heard of Coelan: a transparent German polyurethane coating, which allows the decks to breathe, expanding and contracting with the wood as it moves – unlike everything we had tried which cracked over time.

This seemed the answer to our prayers – solving the leaks and protecting the wood from the elements without losing the looks of

the deck. In fact, Coelan claims regrowth properties allowing it to mend minor damage as it happens.

It sounds like a wonder product and unsurprisingly is fairly expensive, but if it lasts for the 10 years that anecdotal evidence indicates, it should work out cheaper than alternatives. We've put it to the ultimate test – protecting 70-year-old decks. It looks magnificent, but does it do the job? We're just two months on, but so far, it's holding its own. Of course, the ultimate test is durability – I'll let you know how it wears over the years.

The key to a successful application is in the preparation – applying the product is the easiest part of the job. Apart from protecting the boat, the most important thing to get right is timing: remember that the decks will need drying and curing time for two coats of primer and five topcoats – and can't be walked upon for large chunks of time.

1 If possible, have your boat lifted into a protected dry area for the application – the decks mustn't be exposed to rain or direct sunshine during the process or for 24 hours before (damp cold atmosphere will slow the drying and curing time).

2 Remove any old varnish/paint with vigorous sanding – do not use solvents. We tried belt and palm sanders but achieved a quicker and beautifully even finish with an orbital sander (approx £30).





**3** If you're tackling old decks, it's wise to find out what material is in your seams to ensure it is compatible with Coelan. As is probably the case with many old boats, we had a cocktail of sealants, including tar, silicone sealant and Sikaflex, which had to be removed.

We went through each seam with a Fein multimaster, which has an attachment for this purpose. Our deck planks were nailed through the sides, which slowed us up as it was impossible to get a clear drag without hitting a nail every few inches.

**4** We cleared the leftover sealant and dirt out using the traditional method – an old fashioned file, bent to a 45-degree angle and filed to a point. Scrape along the seams at an angle, to clear all the sides of residue.

**5** When the seams are dirt-free, you're ready to refill them with the

appropriate sealant (Coelan recommends Sikaflex 290DC for the seams). To keep the rest of the decks clean while you do this, and for a neat finish, use tape to mask the area surrounding the seams.

**6** Using the small brush provided, paint primer into the seams, covering the whole area. When that has cured (30 minutes), using a manual gun (which allows controlled application), fill the seams with Sikaflex. This is quite fiddly but if in doubt, put in more – you can flatten it out in the next stage.



**7** Work along the seams flattening Sikaflex out with a scraper or file. The tape will protect the decks.

**8** Using a knife, remove the tape, being careful not to drop any on the deck, as the edges will be wet with leftover Sikaflex.

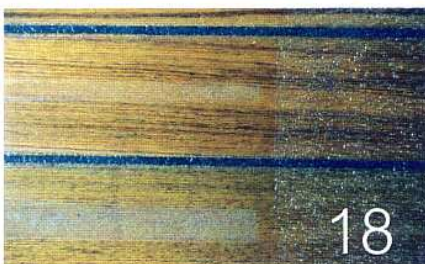
**9** Sikaflex can take up to a month to cure, depending on

conditions – we allowed seven days before further treatment. It dries on the surface within a few hours but cures from the bottom, so the decks can be walked on.

**10** Once the Sikaflex has cured, lightly sand the decks, removing any marks or rough edges – use 80 grit sandpaper to achieve a good bonding surface. Remove dust with a vacuum cleaner. Anything left will be sealed under the coating and spoil the look.

**11** Mask off any hatches and deck fittings that need protecting. Ensure you have all the materials you need: latex gloves, small mohair roller, small paintbrush and ample primer (there is very little time to spare during the process). You are now ready to apply the Coelan primer, working in small areas (one metre square). Shake the tin of primer to release the metal balls inside.





**12** When applying the primer, it's vitally important to cover all deck areas evenly with both coats as this provides your deck's final colour. Apply the first coat liberally, making sure there are no runs. Use a good quality small fine mohair roller or brush to apply a generous amount and follow the grain to give an even spread.

**13** Curing time for the primer depends on temperature and humidity levels: the first coat should be left for two to three hours before proceeding with the second.

**14** The second coat of primer, which needs to sink in deeper, will need four. Leave between 12 and 24 hours before applying the first transparent boat coating.

**15** Plan your route before applying the coating, noting problem areas and ensuring an easy exit. You are aiming for 1mm thickness, built up over five coats (at 1000ml/sqm).

The consistency is thick and quite difficult to spread so care must be taken when applying to avoid waves – concentration is essential. Immerse the roller in the coating, remove it and hold it above the tin for 10 seconds for the excess to drip back in.

**16** Using a brush for awkward areas and a roller for wider areas, apply the transparent coating. Begin along a straight line and work in metre squares, taking care to avoid joints. Work in sections until the deck is completely covered and leave to dry. Once open, Coelan reacts with air, so when you have

finished, place a thin plastic foil on the surface and another on top of the tin before replacing the lid – a plastic carrier bag, as shown, will suffice. It will protect for a couple of days; if it starts to cure, add Coelan thinners.

**17** Each coat may be left for up to 14 days before applying the next layer. Beyond that, lightly sand the deck to create a key coat, otherwise there is no need for intermediate sanding.

Application of subsequent coats becomes more difficult as it is less obvious which areas have been covered. Work in small sections and try to finish on different lines to avoid pronounced joints.

**18** After the third and fourth coats, we sanded the decks lightly for a smooth finish (120 grit is ample) This also makes it easier to see when applying subsequent coats. On the fourth and fifth coats, use a roller and then brush out for a smoother finish.

While Coelan has a slightly rubbery finish and is less slippery than conventional varnish, it is advisable to add

non-slip to the final coat - we didn't, and consequently our decks are somewhat treacherous in wet weather. We intend to rectify this with a sixth coat, adding Coelan's anti-slip glass beads.

**19** The end result – if you don't like the high gloss look, you can add colour; non-slip will calm the ultra-shiny finish.

**20** ... and if it all goes wrong! If the wet coating is corrupted by moisture it will look like this. We had just applied the first transparent coat when it was dripped on and then dried with this mottled effect. We allowed it to cure and then sanded the area back to the wood and started again with the primer. We then allowed the same curing time before applying the next coat overall and it remains uniform.



#### Drying times

Drying times will vary depending on weather but the ideal conditions for application and storage are temperatures of 18-22°C with humidity levels of 50-55%. At 25° you will need four to five hours drying time; 18° will require six hours, while a temperature of around 15° needs 8-10 hours.