

# DRIVE Marine Services

## Hypersensitivity to Epoxy

For several years now I had heard third hand stories about people who become hypersensitive to Epoxies including a sign at a sailing regatta in Victoria several years ago for Mirror Dinghies. A competitor had become highly sensitive to Epoxy & put up signs stating his total disgust with the product and how nasty all epoxies were.

In the last couple of years I have come across a couple of customers who are hypersensitive to Epoxies and not game to even try Bote Cote Epoxy Resin in case they have a reaction. BoatCraft Pacific usually has at least one person call them every week with a hypersensitivity story and most can use Bote Cote Marine Epoxy System without a problem. Unfortunately, some people are just allergic and even Bote Cote is a No-No.

The first person I came across who is hypersensitive is an 81 year old retired boat builder who still builds traditional skiffs using our Purbond Single Pack Polyurethane adhesive to glue double diagonal planked Historical 10 foot Skiff hulls and his boats are highly sort after. Alf had become so hypersensitive to Epoxies that the last time he used epoxy he ended up bed ridden for over two weeks as his body reacted to the old technology chemicals in the Epoxy hardener he was using even after using personal Protective Equipment. He has also told me of boatbuilders who used to smoke on the job while using epoxies and solvent based paints and most of them passed away too young.



Figure 1 – Alf - The Master Boat builder

During discussion with Alf during a visit as shown in Figure 1, DRIVE Marine Services Staff discussed how our Epoxy products are based on modern technology and much safer to use. Alf had a tricky job to do where he could not guarantee no gap so he purchased a 600 gram kit of EPOX-E-Glue from us and believe it; he had no reaction to EPOX-E-Glue. This is positive proof of someone who is highly sensitive to old technology epoxy being able to use BoatCraft's modern technology Epoxies.

Another person is David Payne, the yacht designer, who became hypersensitive to Epoxies when building his designs. When David came up with a new design for a modern version of an indigenous canoe he asked me to fibreglass it as he was not game to give Bote Cote a go, even though it is modern technology and does not use the nasties in the hardener of the old technology stuff. When I was using the Bote Cote to glass the canoe David ventured closer & closer to where I was working and he was surprised that he had not suffered any abnormal effects. By the end of the day I had him passing me pieces of peelply to finish the job.



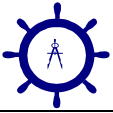
Figure 2– David Payne's Modern Native Canoe

Last year I had a young bloke turn up with his partner to buy some copper boat nails and I noticed his left eye was swollen. For some small talk I asked him "have you run into something" and to my surprise he responded "no, it is my epoxy eye" (I won't add what his girlfriend said). I then informed him on what was happening and that if he kept it up he would become hypersensitive and not be able to play with fixing his favourite boat. I found out he was using a well-known brand from one of the main chandleries (give me a call if you want to know the brand as I do not want to end up in court defending my good name). I convinced him he should give it the flick and he bought a small Bote Cote Kit before he left. He rang up four days later and told me he successfully used Bote Cote without suffering "Epoxy Eye".

A few weeks later the shipwright from Cameron's Marina turned up to buy Copper Boat Nails & Silicon Bronze Screws for the restoration of the Naval Heritage Collections Motor launch (MB 168) and his right eye was swollen.

*For a Comprehensive Range of Boat Building requirements including*

**Bote Cote 2:1 Epoxy Resin, Fillers, Pour-on-Gloss Decoupage Coating, COP-R-BOTE Epoxy Antifouling, AQUACOTE Water Based Polyurethane Coatings, PURBOND Waterproof Single Pack Glue, TREDGRIP Rubberised non-slip Paint, Fibreglass & Carbon Reinforcing Fabrics, FERONITE Rust converter and Primer, Marine, Proof & Aircraft Plywoods, NIDAPLAST Composites, Silicon Bronze Fasteners**  
**Wot Rot Repair Kits** **DAVEY Traditional Bronze & Marine Fittings**



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Figure 3 – MB 168 during post refit trials

I commented “have you been playing with epoxy” and Cyril responded in his best French accent “yes, it has me worried”. I told him how Bote Cote Epoxy is modern technology and does not contain the nasty chemicals in the hardener that the old technology epoxies contain that other suppliers sell in Australia. Again, Cyril took a small kit of Bote Cote and I saw him a few weeks later at a shipwrights function and he reported that he had no reaction to the Bote Cote. As a result, Cameron’s Marina threw out the old technology stuff and now use Bote Cote & EPOX-E-Glue.



Figure 3 – Cyril Inspecting Work on MB168

The main ingredients in the old technology epoxy hardeners which affect people is TETA (TriethyleneTetraAmine) plus a couple of corrosives which have a High Vapour Pressure which means it gasses easily and as a result makes it difficult to avoid breathing the vapour. The reason is that the molecules are very small which also allows the chemicals to easily penetrate your skin causing the redness / rashes. Basically anything which is 3:1, 4:1 or 5:1 ratio will be old technology and I have even come across 2:1 epoxy which is laced with nasties. Have a smell of the hardener (be careful it really affects me if I have a good whiff) and if there is a strong pungent smell it is full of nasties. Another way to

tell if the Epoxy is old technology is that they are classed as Dangerous Goods due to the nasties in the hardener. Therefore they are expensive to freight. As Bote Cote does not contain the nasties it can be sent by Australia POST.

The reason Bote Cote is much safer is that the chemicals used in the hardener are a much lower Vapour Pressure (meaning less likely to turn into a vapour) and the molecules are much larger in size minimising the chance of affecting the user. Bote Cote has other advantages over other epoxies available in Australia as it is easier to mix the correct ratio, does not suffer Amine Blush with the full explanation available at <http://www.boatcraftnsw.com.au/botecote/info.html>

Don’t be a thrill seeker and play it safe. All BoatCraft products developed by Bruce McConkey are based on modern technology and are the safest available for amateurs & professionals. 2:1 modern technology Epoxy is more expensive to manufacture but what is safety worth?

If you insist on using old technology epoxies make sure you wear a P2 respirator rated for Chemicals and always work in a well-ventilated area to minimize the chance of becoming sensitive due to breathing the vapour. Always wear gloves & protective clothing to prevent contact with skin. Never use acetone or other solvents to clean epoxy off your skin as it makes it easier for the molecules to penetrate.

Good Luck with your boat building projects. If you have any questions or are not sure of the next step give us a call or check out our website at [www.BoatCraftNSW.com.au](http://www.BoatCraftNSW.com.au) . I am keen to hear from other people who have become Hypersensitive to Epoxies and other chemicals to see if they can use our products to still work in their chosen career or enjoy their pastime.

For further information or technical assistance we look forward to you contacting us.

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**Wot Rot** Repair Kits **DAVEY** Traditional Bronze & Marine Fittings

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