

SAM DEVLIN ON "SAFETY"

The most controversial aspect of epoxy use is the matter of safety. There is no way around it: **The improper use of epoxy can be injurious and hazardous to your health.** But constant vigilance and continuous care for safe and proper use will minimize the hazard. Boatbuilders using normal precautions and staying safety-minded at all times can use epoxy with the best of results while fully protecting their health. Wear safety glasses, respirators and gloves. Tyvek suits are great protection.

The strongest advice I can give you is to keep epoxy off your skin. Prolonged contact with the resin and hardener can cause an allergic reaction—sensitization—in some people. Once sensitized, the slightest contact with the resin and hardener, their fumes, or even standing dust from epoxy that hasn't fully cured can bring on a reaction.

Keep epoxy off your tools, and always wear gloves that protect wrists as well as hands. I know of three examples where boatbuilders threw caution to the wind and suffered the consequences. Two were first-time builders of boats, but one was a professional who should have known better. The common denominator was failure to use proper gloves. The professional was a reckless fool in all aspects of his life. He refused to use gloves and would plunge his hands into acetone at the end of each job to clean off half-cured resin. While using urethane paints, he would refuse to wear even the simplest dust-filter

mask, let alone an organic-vapor respirator or even a fresh-air system. Predictably, he experienced lung damage from the urethane paint and spent several days spitting up blood. In addition, the exposure to the epoxy caused a rash on both wrists and his forehead that resembled a reaction to poison oak. The rash would disappear after five or six days if he stayed clear of epoxy, but as soon as he walked back into the shop, it would reappear. In the end, he had to give up boatbuilding with epoxy altogether, and the last I heard of him, he was at work in a can factory.

Most gloves available to boat builders are adequate for epoxy but will never stand up to cleanup solvents such as acetone or lacquer thinner. When cleaning up, discard the thin latex gloves you used for epoxying and don heavy, solvent-proof gloves.

And then there's "Devlin's Law", a variant of Murphy's Law. After a goodly amount of experience I have identified three natural temptations that you will experience when you are working with epoxy. Once you have epoxy on your gloves, you WILL have an itch on your nose, your eyes WILL need to be rubbed, and you WILL begin to sweat and need to wipe your brow. I guarantee you'll experience these urges, and just as surely, if you succumb to temptations, you will experience some nose or eye sensitization due to epoxy exposure.

There is simply no alternative to constant vigilance: using safety gear, working as cleanly as possible, and not getting epoxy on your skin. Keeping Devlin's Law in mind, one reason for wearing a canister respirator—apart from the fumes and dust—is to keep yourself from scratching your nose.

After fifteen years of using epoxies almost daily, the only reaction I notice is a slight constriction of the throat during extended use. But when I use a respirator, I never experience the throat irritation.

Of the two epoxy components, the hardener is the most toxic. Keep this in mind, particularly when cleaning the hardener side of your epoxy dispenser. Extreme caution should also be used when sanding partially cured (green) epoxy surfaces, as may happen in the winter in an unheated shop. Always wear a respirator and protective clothing, even if it's only street clothes that are laundered daily and cover all parts of the body likely to come in contact with uncured epoxy. If you insist on keeping your beard, a full-hood, powered-respirator fresh-air system may be the only answer, since regular cartridge-type respirators will not seal properly over a beard.

The bottom line, my macho friends, is to respect these chemicals; just because the hazards are invisible does not mean they are absent.

I have seen a couple instances of almost magical acts of reverse gravity in which epoxy or its resin and hardener components splashed up into boatbuilders eyes. In each instance we had to rush the victim outside to a water hose for a lengthy flushing of his eyes. Then rush him to the emergency room where the doctor repeated the process—not something anyone would do by choice. Wear eye protection at all times. Safety glasses don't work well for me because I find them uncomfortable. And if eyeglasses are

uncomfortable, at some point you'll find yourself working without them—and that's when accidents happen. Even if you don't wear eyeglasses for vision, get yourself fitted with a proper expensive set of frames with clear lenses. Spend some money on them so you won't treat them casually and wreck them. Then wear them constantly in the shop so you get used to them.

And even the protection can't be taken for granted. I've also seen a worker develop nasty looking, painful hands as a reaction to latex disposable gloves, which in his case was probably a reaction to the talcum powder in them. He was fine after he switched to non-talc gloves over soft lightweight cotton liner gloves.

Moderation is the best protection. Always shower after a work session; it will help keep your body clean and healthy. Also don't forget to launder your clothing often. Wearing the epoxy-encrusted clothes day after day just continues to expose you to uncured resin or hardener.

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- Devlin's Law



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