

# Cautionary Tales

by Colin Snowdon

As a result of exposure to a variety of sensitising agents I have developed industrial asthma. This is not a lot of fun it has to be said and the most galling thing about it is that if the health and safety rules had been tighter and more rigidly applied during my working life I might not be crippled now. What's this got to do with you a modeller? Well quite a lot actually because most of the substances I was exposed to are in common use by modellers plus of course the multitude of power and hand tools we work with.

The classic reaction when ever someone like me starts on a safety diatribe is to say, " I don't get enough exposure to be even remotely at risk". Well I think it is important to consider the type of exposure that you receive and the breadth of exposures you will be involved with. A modeller is not exposed to fumes in the same way as a factory worker. Factory workers have to be made aware of what they are handling and work in controlled environments with extraction to suit. Your kitchen is not quite the same and unless you remember to ensure good ventilation then the concentrations you will face although not lasting as long will be far greater. Also it is unlikely that many of us know exactly what is the content of the various glues and solders we use in the construction of a model and also what the actual effect would be upon us of those contents. The only retailer ever to have supplied me with a COSHH (Control Of Substances Hazardous to Health) sheet when I bought solvent glue was C&L at Ally Pally this year and this after 40 years of buying glues.

Many of the glues we use have the black cross on an orange background indicating a breathing irritant. What is not made clear is that some of these will not just make you cough but will in fact cause asthma with continued exposure. I know from bitter experience that Cyano acrylates (super glues) and plastic glues containing methyl methacrylate are two. Ketones are in much solvent plastic and spray glues and can cause some very strange side effects if breathed in in any quantity although the story they can cause sex change in men is not even remotely proven. Permitted concentrations are worked out for an averagely healthy person. If you are susceptible to chest problems the size of concentration you can tolerate is drastically reduced. The problem is if you are susceptible but don't know it and miss the early indications, which can be very subtle. Prolonged exposure after that point will cause permanent problems. Cut down exposure by keeping the top on glue bottles as much as possible the best way to avoid vapours is to stop them being there.

It is not just glues, which cause problems. Solder needs a flux if it is to run properly and the fluxes cause the main problems. Acid fluxes are unpleasant but because of the evil stink and the effect on our skin we tend to treat them with respect. Resin paste fluxes however are seen as inert but this is not the case. Unless you specify otherwise they will contain a substance called colophony released when the flux melts. Colophony can cause asthma in certain people and I personally would recommend you do not use this type of flux. I no longer do but this is to allow me to solder without hospital treatment. The best way to get your supplies is from a major tool supplier the number of blank looks I got from my local suppliers when asking for colophony free multicore was legion. Of course fumes are not the only problem with soldering, the iron is hot so it should always be put in an iron stand preferably one with close coils or a cover over the bit but never put down on a surface. I remember a friend who did just that and when the iron fell off he caught it, as you might suspect it was of course by the hot end, needless to say we ended up in casualty. I'll say more about the lead in a while when we come to other power tools.

The person who uses power tools makes a better baseboard I've read somewhere and this is quite true of the person who uses power tools properly. However this is not always the case and sometimes the person who uses power tools is the person in the hospital. Lets start with the lead I always run any powered tool through an earth leakage circuit breaker then if I cut the lead the power goes off (same for soldering irons). Always clamp the work piece down with a clamp and never lock the trigger on as is possible with some tools. This was brought home to me one club night when some chipboard was being cut. The operator got some one to sit on the board then locked up the trigger and away he went. Or at least he should have but he was not holding the saw firmly and it bounced off the edge of the board out of his hands and ran loose over the board at the person sitting there. The power was locked on so the blade did not stop and had

the person sitting not moved fast would have done him desperate violence. I now get any major cutting done at the wood yard they are quite willing to slice up 8x4 sheets into 4-inch strips if I want it. This keeps dust and shavings out of the home and as the dust from MDF contains a carcinogen (phenol) this is always a good idea (as is specifying phenol free MDF). Whilst on dust my new sander has a bag to collect the dust and does it very well. You just knew I was going to say but! Sander dust is explosive and must be disposed of in a fastened bag in your bin. If you throw it on a fire (house or garden) there will be a large flash leading back up the trail of dust to you. When I was an apprentice the cabinetmakers always used to send their newest apprentice to the incinerator with a bucket of sander dust to chuck in, the bucket was a very strange shape after a few lads had been caught.

This brings us to hand tools most of which are sharp or heavy or both. Keep sharp tools sharp may seem a strange maxim but it is easier to control the tool if you are using minimum force rather than leaning on it to make it cut. Craft knives and scalpels seem to be a common tool. If you have a small family keep them in a box out of the way of little hands. I have an arrangement with my local g.p. To dispose of my old blades in his clinical sharps waste. Scalpel blades cut dustmen just as well as they do modellers even when they are no longer sharp enough for use. A good rule is never to catch any tool that falls off your work place let it hit the floor and keep out of the way; this will prevent you stabbing your self or breaking a finger. Last but not least keep tools in a box or rack and not lying around. The course of marital bliss is unlikely to be smooth if your partner keeps putting their hand on something sharp hidden under a pile of paper. At risk of stepping on your personal liberty, don't smoke while you work, take a break and smoke elsewhere. There are far too many flammable substances on a modeller's workbench and some chemicals are transformed into very harmful substances if breathed in through the glowing end of a cigarette or pipe bowl. Trichlorethylene (a common degreaser) will form Phosgene gas if exposed in this manner, or come to that left in sunshine. As Phosgene was used in World War 1 as a poison gas the effect of which is to make you lungs fill with froth so you drown on dry land, this is not to be recommended.

There is no reason for anybody to give up modelling or to go about it in a climate of fear. However being serious about safety will prevent you being electrocuted, poisoned, asphyxiated or maimed by your hobby. In my book being able to count to ten on my fingers both before and after a making session is always to be recommended. Continue to enjoy your hobby but please do it with the safety of yourself and those around you firmly in mind.

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