

# natural is good, synthetic is bad - yeah right! (or a rationalist's rant)

For the 46 years your scribe has been associated with the paint industry I can say that it has been driven by the pursuit of technical excellence and more benign products. Altruism may have played second fiddle to perceived market benefit but the facts remain that the industry has imposed standards on itself; well ahead of any legislation.

Yet, while we blithely pour 100% VOC petrol in our cars, lawnmowers, chainsaws etc (which also contains a substantial amount of carcinogenic solvent that the paint industry imposed a voluntary ban on 40 years ago!), it is still paint which comes in for more cheap shots than almost any other product.

Although the NZ statistics department is likely to show that there are more deaths by chocolate than deaths by waterborne paint, there is a significant percentage of the population who are sensitive to possible threats to their health and well being. Nescience of the true chemical facts makes these consumers an easy target for quasi-scientific legerdemain.

Let's tick them off! Firstly, any hydrocarbon solvent; whether from natural vegetable sources or from fossil fuel sources, has a degree of toxicity. Solvents, such as turpentine, are produced by plants to kill attacking insects – they are not benign materials. The only (virtually) non-toxic solvents are synthetically designed and produced.

Secondly, on their own, natural oils are very poor binders for paints without being significantly and synthetically modified. The most useful (and popular) of them, linseed oil, is very slow to dry; produces a 'weak' initial film; provides an ideal nutrient for moulds and fungi; yellows like anything and, as it ages, oxidises to produce a very, very brittle film.

Thirdly; 'pigmented with natural earth pigments'? Sounds pretty good from a touchy feely point of view? Let us examine this further and take the case of the earth pigment 'Burnt Sienna'. This can be produced 'naturally' by digging a hole in the Tuscan countryside and collecting the dirt; washing off the 'dross' with

copious amounts of water; roasting the base material in a (fossil fuelled) furnace and then grinding in a mill. On the other hand, one can get the precise shade synthetically from the oxidation of scrap iron in a virtually enclosed system. Which is better for the environment? It's a no brainer!

Fourthly, we are bombarded with the merits of 'non synthetic' materials such as silicate paints and milk paints. MILK PAINTS! Ye Gods, spare me! The ancient secret formula (which is freely available on the internet) shows this to be the product of casein and lime.

Even its proponents acknowledge that it provides 'banquet time' for a range of bacteria and yeasts; produces colours that are 'interesting in their variations' and that an overcoat of varnish is required to reduce the inherent water sensitivity of the films.

Interestingly, halfway decent silicate and milk paints can be made if a fair slug of synthetic acrylic or styrene acrylic resin is added to them and, especially to the latter, a healthy dose of synthetic preservative. Of course the advertising of such additions would seriously detract from the 'natural' image.

Of course many, many natural things are good for you but severe allergic reactions to such natural things as gluten, lactose and peanuts are the cause of several deaths per year. Add to that list deadly nightshade, curare, snake venom, Aids and Ebola viruses and one can see that nature and natural materials need to be treated with caution.

There exists within New Zealand and Australia pretty stringent labelling programmes run under the auspices of Environmental Choice. Via these programmes, independent third parties make the judgement on the relative safety of paints. They also test to the 'fitness for purpose' of the product measured against international standards.

'Natural' paints should be able to meet this criteria and not depend on large quantities of that other natural material, Bullsh!t.