

less is more – yeah right!

I am sometimes asked as to why our paint is often more expensive and, as paint is just paint, surely the cheap brands are just as good. When I climb down off the roof; apply the difibrillator and pour myself a stiff G & T, I ask whether they want the long answer or the short one (or maybe they just want a smack in the mouth)?

There are two ways to reduce the costs of a can of paint; one is to reduce overheads and the other is to reduce the quality and quantity of raw materials used.

Reducing overheads can be managed by such things as reducing representation; reducing the number of outlets; number of colour cards and support material etcetera, etcetera – in fact many of the things which sit in the 'service' area. There are excellent opportunities for smaller local players to reduce their overheads but far fewer for national suppliers.

To reduce the costs of the paint raw materials is a straight question of the trade-offs and we face exactly the same decisions as would a baker of steak pies. They can either reduce the amount of steak in the pie (and increase the amount of pastry and gelatine) or reduce the quality of the steak used. Even greater savings are to be made if both the quality and the quantity are reduced.

Sales may however suffer!

The exact parallels exist in paint – but they are not always so obvious.

Just about everyone knows that the 'white stuff' in paint that provides hiding power is called titanium dioxide. Fewer people would know that the best titanium dioxides are: a) fully rutilised, preferably via the chloride process, b) contain particles predominantly between the sizes of 200-350 nanometres, c) have each particle individually coated to be able to 'capture' light generated free radicals, d) have a further discreet coating to ensure that the particles do not aggregate and are readily dispersed into the paint binders.

The above is not to create the opportunity to air my vast knowledge but to show that the best titanium dioxides contain a broad field of technologies to improve their hiding power and durability – the poorer, cheaper ones do not!

The use of a reduced amount of high quality titanium dioxide results directly into reduced hiding power. The difference in cost for a few extra litres in paint for another coat is a nuisance; the extra cost to have that extra coat applied can be a significant burden.

There are an even greater range of parameters associated with paint binders and the number of technologies used to achieve

these parameters. There are the fundamental chemistries – PVA, styrene, and acrylic, representing economy, economy plus and business classes – but there are also the extras. There are higher performing 'add-ons' such as wet adhesion, stain resistance, chemical resistance etc, which always come at a price.

The great difficulty with paint binders is that the features are not immediately obvious – not like with a new car or a mobile phone where one can have immediate demonstrations of the sexy new gizmos. The advantages delivered by highly developed paint binders must be carefully tested by the paint chemist over a range of conditions and, generally simply taken on trust by the paint specifier or buyer.

Although reductions in binder quality are not immediately obvious, the reduction in quality becomes immediately obvious as soon as the paint has dried.

Films are flatter, more porous and lack resilience and toughness.

Another excellent way to cheapen paint is simply to add more water – well thick water anyway! There are plenty of ways of thickening water facily. Simply add a packet of cellulose based wallpaper paste to a bucket of water and 'Hey Presto' – thick water. Addition of this reduces the volume solids in the can (which is not immediately obvious) and also the thickness of the protective film. But hey! The paint in the can is nice and thick and it must be greener because water is green isn't it?

I won't belabour the point much more but I would like to point out one more example. It is no secret that Resene, in its orange and red bases and tinters, uses pigments based on diketopyrrolopyrrole chemistry, which are very expensive. Exactly the same shades can be produced using toluidine chemistry, which is much more economic. There is a difference however in that toluidine chemistry has limited exterior exposure resistance. A colour can then be matched to a Resene colour giving an acceptable initial impression. The false economy will only become apparent with time – sometimes a very short time.

Taking cost out of paint is therefore a simple subtractive process. However, along with the cost goes quality. Painting is not always a preferred pastime and those that have been seduced into buying cheap paint will long remember the self-inflicted punishment of a much earlier repaint (and even a complete removal) that could have been avoided with a few more bucks up front. To be able to reduce cost without losing quality is just another one of the 'grail' quests we paint chemists chase.