

Alkyds: A new life and they remain very relevant

New alkyd emulsions offering near zero VOC could be a revolutionary technology for the paint and coatings industry.

I was recently speaking with the technical director of a major national paint company who reported that his technical staff spends nearly 40% of their time incrementally reformulating their paint offerings in order to meet increasingly stringent VOC regulations. Forty percent of his staff's time is a lot of time. This is robbing his staff's energy and efforts that could be devoted elsewhere such as new product development, product differentiation efforts, or the all-important customer intelligence-gathering interface.

The technical director was expressing a universal phenomenon in the paint industry. Large amounts of manpower are focused on the incremental versus substantive change in formulative technologies. Formulators devote a disproportionate amount of their time trying to achieve another 25-50 grams of solvent reduced out of each formulation instead of shooting for near zero from the start. Why is that? What conditions prevail within alkyd technologies for paint that prohibits "leaping" forward to the end-game objective, which is near zero VOC?

Until recently, this has primarily been because conventional water-based technologies have not been capable of achieving the two most important aspects important to the success of these technologies:

- Very low solvent levels, and
- Good performance in applications other than flat wall paint.

THE PARADIGM HAS SHIFTED

With the recent introduction of true alkyd emulsions in North America, all this can

change. These new alkyd emulsions, offered by companies such as Reichhold, Worlee and DSM, achieve near zero VOC yet can be formulated into high gloss paints, penetrating stains, DTM (direct to metal) coatings and stain blockers at less than 50g/l.

We are looking at the industry's ability to meet all future regulations now. The industry can "leap" into acceptable formulations without sacrificing performance, and more importantly we're looking at the chance to have chemists spend their precious time on the really important stuff, like new products and markets and, it is possible to do this now. I'm excited to see this new development in the industry; it legitimately opens up the path for significant product differentiation.

AN IMPORTANT SIDE BENEFIT

There is another not-so insignificant benefit to these new, ecologically acceptable alkyd emulsions. Unlike conventional water-based technologies that are based almost exclusively on "\$100 barrel" crude oil, alkyd emulsions are based on renewable resources, such as soybean, linseed and other vegetable oils. This is truly a marketer's dream.

Time will tell, but we may be looking at the most significant and revolutionary technology to come along since the introduction of latex paints in the 1950s.

The companies offering these new alkyd emulsions include DSM; Reichhold, which offers Beckosol; and Worlee, which offers Alkydharze. **CW**

See Chemark's ad this month on page 44.