

THE MANUFACTURER'S GUIDE TO OEM COATINGS



OEM coatings can affect operations in surprising, sometimes counter-intuitive ways. Sometimes, the proper OEM coating can be the answer for solving common production bottlenecks such as cure times, inefficient production processes and VOC-compliance. Often, the right coatings expert can be instrumental to resolving these issues in unexpected ways.

FINDING A WINNING COATINGS STRATEGY



Production time is a pain point we encounter with manufacturers and product finishers as diverse as the OEM market itself. How can we produce equipment quicker, so we can pack it, ship it and sell it more quickly? Call us biased, but we think the right coating can play a critical role in making this happen.

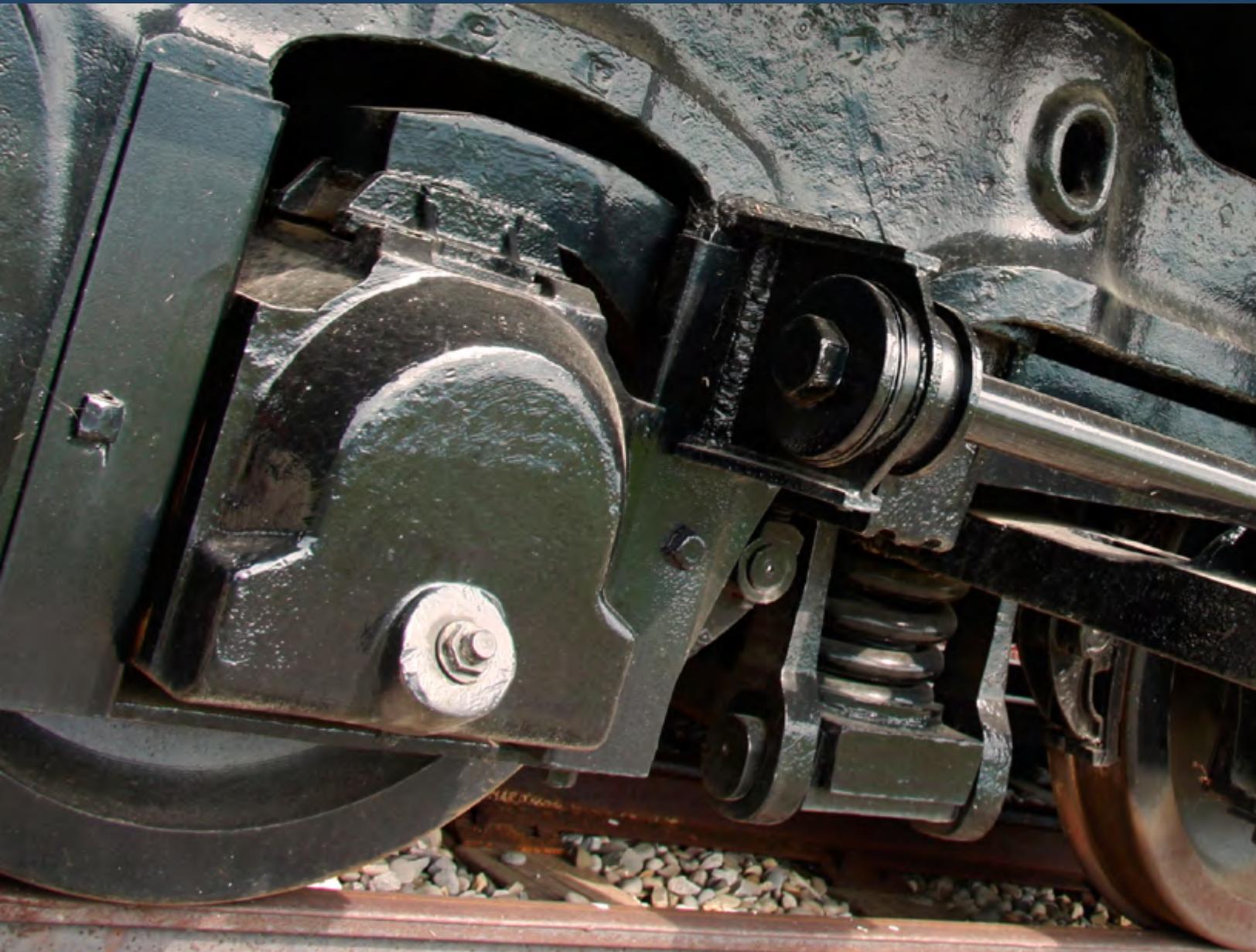
Finding a better way

Finding a coating where the drying process can be catalyzed by a chemical reaction, as opposed to air-dry solvent-based coatings, can end up delivering huge returns by slashing cure times. Over the long run, small increases in efficiency from reduced drying times easily trump a higher cost-per-gallon coating by cutting throughput time.

Many such solutions can be recommended to decrease throughput time. Some of them will be unique to each manufacturing operation, and can only be spotted by a careful inspection of facilities and operations. In some cases, for instance, the type of steel used in production can reduce prep time and speed up overall production. If the difference in price between hot and cold-rolled steel is less than can be gained from less prep time, then it may be a smart decision to spend more for the cold-rolled steel. Anti-weld spatter coatings can shave time that would otherwise be spent grinding a steel substrate smooth before a coating is applied. Sometimes, a different coating that requires a commercial blast instead of a near-white blast, but otherwise has similar properties, can end up delivering big returns.

These are just a few examples where a coatings expert may be able to recommend process efficiencies for manufacturers that have relatively little to do with the coatings products themselves. But there are certain other efficiencies that can be gained by the right OEM coating. Faster curing coatings and high solids, low-VOC products are two promising areas of opportunity.

PAINT CURE TIMES AND COST SAVINGS FOR ALKYDS, URETHANES AND EPOXIES



Alkyds

[Alkyds](#) are veteran materials in the industrial coatings industry. Though they've been around for some time, in some situations, Alkyds may still be the best product for the job. Advancements and hybridizations in alkyd formulas have resurrected these products that were once considered old-fashioned. Alkyd formulations have been modified to be more environmentally friendly, for instance.

The three main draws of Alkyd paints have traditionally been their single-component packaging, relatively low cost and the familiarity with these products among manufacturers who have been using them since they had newly come to market.

Perhaps more importantly though, newer formulations of water-based alkyds show real promise as quick drying, low-VOC products. Certain resins have been proven to speed up the drying process for example, allowing refurbished shipping containers to be stacked only a few hours after they had been coated. This represents a real advancement in the usefulness of an ultra-low VOC alternative to other solvent-based products.

Urethanes and Epoxies

Production is at the mercy of the rate at which the solvent evaporates. This can be a problem when it affects the output of a manufacturing facility. Manufacturers may want to make the switch to a urethane, where paint cure times are drastically reduced, since drying with these products is dependent on a chemical reaction that can be catalyzed from the outside. As production speeds increase, the increased expenditure on a higher cost-per-gallon product is eventually narrowed until the lower throughput time actually leads to cost savings.

Newer formulations of [urethanes](#) and [epoxies](#) are helping to address inefficiencies. Specific formulations— those that cut the amount of harmful byproducts released into the atmosphere, and reduce the amount of product that's needed by going farther with less—represent great opportunities for original equipment manufacturers and product finishers to increase production while cutting coatings costs.

STAYING VOC-COMPLIANT WITH HIGH SOLIDS AND WATER-BASED PRODUCTS



[Regulations on the output of VOCs](#) are becoming more stringent across the United States. Manufacturers and product finishers may assume that they'll either have to cut production to stay VOC-compliant, or drastically increase their coatings expenditures on products that keep them VOC-compliant. Either way, it's often assumed that this regulatory change will be accompanied by rising coatings costs.

It is true that higher-solids coatings tend to come at a higher cost-per-gallon, but because of their low solvent content it actually translates to a lower cost-per-unit. But, as we've seen before, a more expensive OEM coating does not always translate to higher costs across the board. The reason has to do with what you're really getting when you buy a low solids, solvent-based coating. Much of what you buy is destined to evaporate, meaning more of the product is required to cover the same area.

Water-based products are also promising alternatives for lowering VOC emissions. Water can often be doing the same job as a solvent, which is typically added to a product only to keep it in a liquid state so that it can be easily applied. New formulations of water-based products are becoming less and less limited by relatively slow cure times—the traditional hang-up associated with water-based coatings—so these products are again entering the conversation as an effective method for limiting VOC emissions.

Advantages of Higher Solid, VOC-Compliant Paint

Let's take a look at an example of high solids coating versus a low solids coating. To achieve a dry film thickness of 20 mils with a 50 percent solids coating, you would need to apply two coats at 20 mils each. In contrast, you would only need to apply one coat at 20 mils if the product was a [100 percent solid](#). That means, a coating that is twice as expensive as a 50 percent solids coating would end up costing roughly the same amount in the long run, since twice the area is coated with the same amount of product. This may seem like a relative wash, and nothing worth modifying your buying practices for, if the benefits of high solids coatings were to end there. But they don't.

Staying VOC-compliant is about more than running afoul of regulators or avoiding fines. Production can be limited by the amount of VOCs your current manufacturing processes release in the atmosphere. Those who walk the fine line between acceptable amounts of VOC output and exceeding that limit often shell out huge amounts for environmental compliance auditing to make sure they're coming in under their output budgets.

Cutting VOCs doesn't have to be the regulatory burden it's often made out to be. The right product is often capable of keeping manufacturers from having to tweak their processes too significantly; ensuring increasingly strict regulations aren't derailing business. When VOC limits threaten your way of doing business, the right OEM coating and advising from an industrial coatings expert can help manufacturers to keep things running smoothly.

NAILING THE OEM FINISH



It's product and process recommendations like those above, made by experienced coatings professionals familiar with OEM recommendations that can make huge impacts on the bottom lines of manufacturers.

If you're a manufacturer looking for ways to cut production times and increase productivity, and you think you may benefit from [a discussion with an experienced coatings professional](#), we'd love to hear from you. Please feel free to reach out to us via the contact information below to get the conversation started.

ABOUT US COATINGS

US Coatings is a leading provider of high-performance coatings and linings. We custom tailor our industrial coating products to fit the needs of clients across a wide variety of markets, and we pride ourselves on offering superior customer service through the duration of the job.

Founded in 2000 in St. Louis, Missouri, US Coatings has grown from a two-man operation to a company doing business all over the country and with close connections spanning a vast number of specialty coatings markets. Despite this success, we're committed to remaining nimble enough to be able to take on any coatings challenge, large or small.

US Coatings is focused on building relationships with our customers so we're here before, during and after the sale with personalized attention to your project that our competitors can't match. More than just purveyors of paint, we take collaborating with our customers seriously, providing superior service throughout the course of your job.

If you are an original equipment manufacturer and would like to discuss the role industrial coatings play in your operation, we'd love to hear from you. Please contact:

Mike Reed

General Manager

NACE Level 3 Coating Inspector #31422

Email mreed@uscoatings.com

Mobile 314.220.4768

Office 314.205.1500
