Sustainable Coating Solutions

BARIL

OEM FINISHING

FOUR KEY FACTORS MANUFACTURERS SHOULD CONSIDER BEFORE CHANGING PAINT

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FOR PRODUCT FINISHERS, CHANGING PAINT CAN BE OVERWELMING.

For original equipment manufacturers, changing suppliers for components used for finished goods is a normal and ongoing process. Technology updates, price fluctuations and the evolution of a manufacturer's supply chain are among the many reasons why OEMs work with different suppliers over the life of their business. In general most of these changes are relatively seamless. Some however require more analysis up front and can be fraught with challenges if the proper steps are not taken. One particular modification that can be especially overwhelming is changing the paint used within a finishing line.

Protective coating chemistry is complex and directly influenced by multiple dimensions that must be accounted for during the formulation, handling and application process. The primers and topcoats used on a daily basis are highly dependent on everything from the equipment used to apply them to the ambient temperature and humidity. When one considers all of the different elements that impact how a coating reacts when it is applied and how it ultimately performs, it is understandable why manufacturers may have elevated levels of anxiety when switching to a new and unfamiliar paint. This guide attempts to break down the primary issues OEMs face when evaluating a potential paint change and provides a framework for a comprehensive decesion making process.

THE FOUR FACTORS TO CONSIDER WHEN CHANGING PAINT

LONG TERM PERFORMANCE

Will long-term performance of the paint impact competitive advantage?

FINANCIAL IMPACT

What tangible financial benefit will switching paint have on our overall business?

EQUIPMENT REQUIREMENTS

Will new equipment investments be required to upgrade paint?

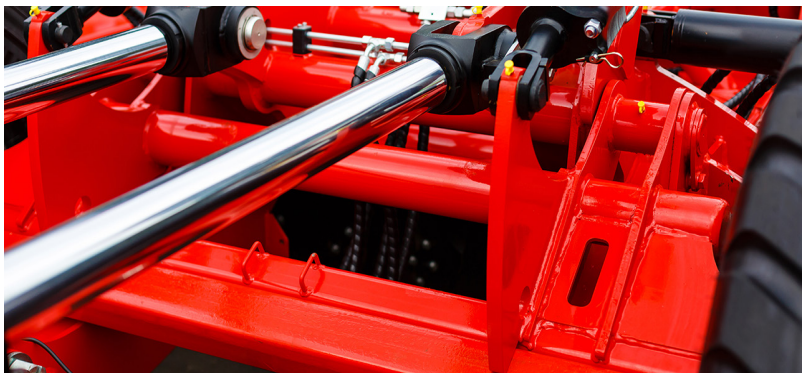
MANUFACTURER SUPPORT

What ongoing support is available from my manufacturer?

LONG TERM PERFORMANCE

Will long-term performance of the paint impact competitive advantage?

A finished product's paint finish provides customers with their initial impression of a product's overall level of quality. A higher performance coating will make products less susceptible to corrosion and allow them to retain "like new" color and gloss for longer periods of time. Higher performing coatings may also allow manufacturers to provide extended warranties and offer more favorable service contracts. Qualitative attributes such as these directly influence a product's competitive advantage and subsequent pricing power.



Within the universe of finishing systems for OEM applications, there are several categories of liquid applied coating technology. Characteristics within these segments varies greatly as it relates to long-term performance, applictaion process, and cost. Some manufacturers specialize in certain types of paint technology while others offer a full spectrum of systems that are promoted into multiple vertical markets. These primary catagories are further enhanced to engineer coatings with specefic performance benefits such as high corrosion resistance, improved weathering and anti-microbial properties. Organic zinc-rich primers, acrylic modified polyurethanes and moisture-cured urethanes are all examples of highly popular coating segments designed for more targeted applications. Selecting the appropriate paint all starts with a basic understanding of general coating chemistry. From there, manufacturers should work with their paint suppliers to determine the appropriate finishing solution. The chart below provides a general overview of the most popular types of liquid applied OEM coatings and their relative

	Abraison Resistance	UV Protection	Corrosion Resistance	Cure Time
Alkyd	low	moderate	low	slow
Epoxy	moderate	low	high	moderate
Polyurethane	moderate	high	moderate	moderate
Polyester Hybrid	high	high	moderate	moderate
Polyaspartic	high	high	high	fast

Review a coating manufacturer's specified product performance as it relates to metrics such as corrosion resistance, abraision resistance and weathering. Ask for testing data and samples for comparison. Finally, determine the potential long-term accretive value driven from an improved paint finish so that it may be incorporated into the final decesion. Key testing methods to consider when evaluating coating performance include:

- UV Resistance: ASTMG154 UV-A; measures accelerating weathering using moisture and UV exposure over a period of time
- Florida Black Box Test: ASTMD4151; measures gloss retention over a period of time using concentrated UV exposure
- Salt Spray: ASTMB117; used to produce relative corrosion resistance information for coated metals over time
- Impact Resistance: ASTMD2794; tests related deformation or damage to coatings as a result of sudden impact
- Abrasion Resistance: ASTMD4060; tests resistance of coatings to abrasion by measuring related coating loss over time
- Pull Off: ASTMD4541; uses an pull-test to measure coating substrate adhesion based on PSI
- Flexibility: ASTMD522; measures a coating's ability to resist cracking when elongated (bent) while on a substrate

FINANCIAL IMPACT

What tangible financial benefit will switching paint have on our overall business?

One of the most critical factors to consider when evaluating a new paint system is the resulting financial implications for the company. Beyond the actual per-gallon unit cost of the coating, manufacturers need to consider the overall solids content of the material and projected coverage rates based on the application method and environment. Theoretical coverage rates are based on the solids content of the paint and how thick it is applied. Practical (actual) coverage rates differ significantly and depend on how clean the environment is, the type of spray equipment used and the dimensions of the product being sprayed. Based on standard transfer efficiencies, practical coverage rates for smaller and larger dimensions are 50% and 70% respectively of their theoretical coverage rates.

Outside of any cost differentials between paint products, often times the more significant financial variable lies with how the new paint will impact a manufacturer's finishing line process. Primers and topcoats that cure slower may cause production bottlenecks or worse, the need for rework once the finished good has been transferred over to shipping.

Over the last decade, paint manufacturers have made significant advancements in the development of paints and coatings that are designed to cure faster within OEM settings. These systems are especially useful within LEAN manufacturing processes where companies are focused on optimizing product flow and reducing waste and inventory throughout the process. This frees up cash and allows for improvements in other areas such as storage optimization and warehouse overhead while adding greater flexibility to the overall process. Faster curing finishing systems are a new and exciting tool that manufacturers are using to streamline their overall operation and increase productivity.

Common Financial Considerations When Switching Paint:

Potential costs:

- Incease (Decrease) in ft^2 paint cost
- Amortized costs of new equipment

Potential benefits:

- Reduced WIP (work in process) inventory
- Reduced space allocation
- Reduced paint waste
- Improved product flow / reduced bottlenecks
- Energy consumption decreases
- Improved production flexibiity

EQUIPMENT REQUIREMENTS

Will new equipment investments be required to upgrade paint?

Along with advancements in coating technology have come substantial technological improvements with regards to application equipment. Equipment manufacturers offer a multitude of specialized high and low pressure airless and air assisted airless spray systems that can be configured to dispense all types of coatings. This new technology provides for increased product-finishing efficiencies through features such as proportioned mixing of 2-component (2k) products, integrated purging for maintenance purposes and the ability to mix off-ratio products (3:1, 4:1 ratios, etc.). The type of coating selected will directly impact what equipment is needed. An effective relationship with both the paint and equipment manufacturer/distributor is key to ensure that equipment is properly installed, calibrated and maintained to work as efficiently as possible.

Automatic mixing and proportioning system.

Having recently switched to a higher quality and faster curing coating system, this manufacturer retrofitted their facility with state of the art pumps and proportionining equipment. Productivity immediately increased by 35% and the upgrades paid for themselves in 9 months.

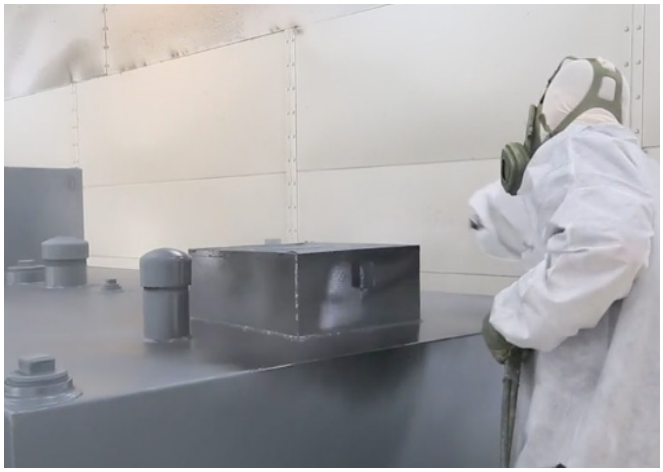
Specialized equipment may be a logical investment for several reasons. It can help manufacturers become far more effecient in their overall production and allow for an improved, more consistent finish. It can also save money by reducing paint waste and limiting the potential for errors. In addition, this equipment allows manufacturers to better track material usage– a critical cost factor and QC metric for high volume operations. Most importantly, it can improve morale which is directly tied to productivtity. In the greater context of upgrading paint, any necessary equipment investments along with associated manufacturing throughouput improvements should be taken into consideration.

MANUFACTURER SUPPORT

What Ongoing Support is Available from my Paint Manufacturer?

The high performance coating industry is loaded with sales professionals who are very knowledgeable about the capabilities of their paint. They maintain a deep understanding of where their products should be used and are a great resource for OEMs when evaluating potential finishing options. In addition, most paint manufacturers employ a technical services team that works with clients on an ongoing basis to ensure that the products are working appropriately and per the specification. A paint manufacturer's ability to provide expert and timely assistance from both a paint and equipment standpoint is a critical factor to consider when evaluating a potential supplier. A halted production line due to a finishing issue can lead to significant costs and a proper sense of urgency and competence from your supplier is imperative.

Your evaluation of a potential paint supplier's technical support capabilities should start during your initial product evaluations - likely on or prior to the product demonstration. Paint suppliers are generally willing to hold a full product demonstration at your facility and if necessary, bring in outside equipment. There you will be able to meet with their technical support team and have your painters directly interact with them to determine if the relationship is a good long-term fit.



While changing paint can be an intimidating prospect, if done carefully and with the appropriate amount of research, it can provide businesses with significant improvements and the scale necessary for sustained long-term growth. Special care should be taken to consider the true financial impact, the product quality implications and your level of confidence in the paint manufacturer to help support the growth of your business.

YOUR FRAMEWORK FOR OPTIMAL FINISHING PRODUCTIVITY

"With You Every Step of the Way"

Baril coatings works with manufacturers and product finishers to engineer and impliment high performance finishing solutions tailored to the needs of our clients. Our comprehensive line of primers top-coats offer industry leading performance and production effeciency - all supported forever by our veteran technical team.

Evaluation

We meet with you to learn more about your current finishing line needs and provide you with initial insight on potential options, benefits and cost.

Recommendation & Demo

We develop a specification binder that includes a range of finishing options. An onsite demonstration is held to confirm the appropriate systems.

Implimentation

Baril works onsite with your team to activate your new paint system and help calibrate equipment for maximum production effeciency.

"The quality of baril coatings is phenominal. It is probably one of the most durable coatings we have ever worked with. In 20-minutes it is dry to the touch. It enables us to turn product around and get it ready to ship very quickly.

- Bob Gilbert
Quick Cut Manufacturing

"I have had tremendous success partnering with Baril Coatings. They are consistently exploring ways to implement successful coating programs that save you time, resources and money. My kind of company and people!"

- Greg Baker,
Blast One International

"Our machines operate in a very abraisive environment and are exposed to water all day long. The Baril Zinc primer is a fantastic product for our application. I would recommend it for any harsh application."

- Steve Van Heel
Park Industries

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About Us:

Headquartered in Angola, Indiana, Baril Coatings USA is a leading manufacturer of high performance protective coatings for industrial OEM and refinish applications. Our products are manufactured using the latest raw materials and cutting-edge technologies to provide customers with superior long-term performance. Supported by a veteran technical staff, our team of coating professionals leverages decades of experience to work with our clients in implementing successful coating programs that save time, resources and money.

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