

Powder Coating and Model As

I'm sure anyone who has taken a wrench to a lug nut on a painted Model A wheel has thought "there's got to be a better way." Even a great paint job on a wheel does not hold up to impact or compression. The paint separates from the wheel and you have chips. The other problem I ran into with painted wheels is over time the paint rubs off the rim. The exposed metal then begins to corrode and the combination of paint and rust dust floating around inside the wheel can result in frequent flat tires. I first learned about this in Blackshear, Georgia on the way to St. Augustine, Florida in 2001. I had no problem changing the tire (I must have had the advice of six seasoned Model A'ers – supervising me), but wrestling off the tire to replace the tube in hotel parking lot was definitely not as fun as going on a tour. Unfortunately, this was just the first of many dust induced flats that I endured. So after about a half a dozen flats I started looking for solutions and that is when I learned about powder coating.

Powder coating is a process of applying a thermoplastic or thermoset polymer to metal. Thermoplastic polymers will melt once heat is reapplied after curing. Thermoset polymers will not melt again when heat is applied after curing. The powder coating is made of finely ground particle of resin and pigment (I'll come back to this later). While there are different methods of applying powder coat, the most common that we in the Shade Tree A's have run across is process where the polymer or resin is electrostatically charged and applied with a spray gun to an electrostatically charge metal. In other words the resin beads are charged as they leave the sprayer and the wheel has an electric lead on it and an electrostatic charge. The beads are drawn to the metal like bugs to light. Prior to coating the metal has to be free of dust, dirt, oil and corrosion. Some powder coating processes require a multi-step preparation process. The most common form of preparation we run into is a good bead blasting. Once the powder has been applied the resin is cured in an oven. This takes anywhere from 1 to 30 minutes at 280°F to 430°F depending on the type of resin and the type of oven used. This allows the powder to fuse into a continuous film. This continuous film hardens as it cures into a coating that is significantly tougher than paint. It's been six year and nearly 20,000 miles since I had the wheels of my Coupe powder coated and I haven't had another dust induced flat.

When I had the Coupe wheel powder coated I went with gloss black. That's one of the most common powder coat colors. But while most Model A wheels came from the factory in black, we all know there are a host of Ford authorized colors for Model A wheels. And that is where the challenge begins. Remember I said that powder coat is made up of finely ground particles of resin and pigment. Well because of this different powder coat colors can not be obtained by mixing like we do with paint. When a powder coat color comes from the manufacturer it is what it is. So finding the right wheel color can be a challenge.

Fortunately, others in our hobby have already done a lot of the research. Ken Miller from East Tennessee started looking into this some time ago and found Tiger Drylac®, powder coating manufacturer. Ken worked with Tiger Drylac® who supplied Ken with a color chart and metal samples powder coated in various colors. Ken supplied me with the table


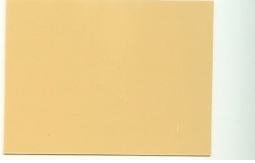
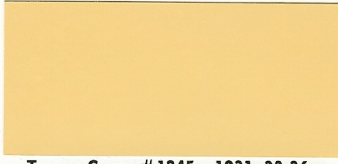




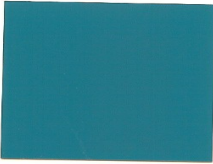




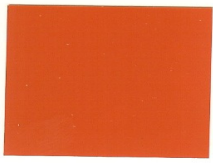
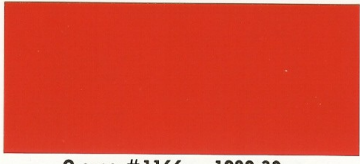

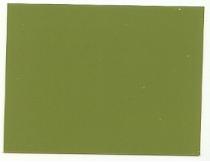

below that compares different Tiger Drylac® powder coat colors (these are identified by their RAL number) with Model A wheel colors.







TIGER DRYLAC® COLORS vs. MODEL A COLORS

Tiger Drylac® Color	Model A Color	Comparison to MAFCA Chip
RAL 1002	Tacoma Cream	Very Close
RAL 5009	Hessian Blue	Much Darker; Closer to Duchess Blue
RAL 2010	Orange	Very Close
RAL 6025	Apple Green	Close; Chip Has Slightly More Olive
RAL 3004	Aurora Red	Darker; Closer to Rubelite Red
RAL 3001	English Coach Vermilion	Very Close

Also it is important to remember that powder coating is not just for wheels. I've had oil pans, oil filler tube caps, transmission inspection plates and engine pans powder coated. And other club members have had whole frames powder coated

Since I've thinking about powder coat the wheels on Dotti's '31 Fordor, I was looking for a powder coating that matched the Straw color. So I obtained a copy of the *Antique Ford Repaint Manual* by PPG and MAFCA's *Model A Ford Paint & Finish Guide*. I also contacted Tiger Drylac® and they sent me a color chart of their *RAL Colors, Exterior Powder Coatings*. Then I employed my "secret weapon." I turned my lovely bride and resident interior decorator loose with the two Model A color charts, the Tiger Drylac® color chart and wheel Richard Dunevent had powder coated in the RAL 1002 color. Dotti believes the Tiger Drylac® RAL 1002 color is actually closer to the Straw color in the two Model A color charts than Tacoma cream. I have included all the above color chips from both Model A color charts and the corresponding chips from Tiger Drylac® for your own evaluation. Unfortunately, these colors will vary depending on the printer used to print the news letter and even the monitor you may be using to view this article online. What we found is whatever you want to call the RAL 1002 color, we like it and I guess that is what really counts.

		 Tacoma Cream #1245—1931, 33-36
RAL 1002	MAFCA Tacoma Cream	PPG Tacoma Cream
		 Straw #526 — 1929-30
RAL 1002	MAFCA Straw	PPG Straw
		
RAL 5009	MAFCA Hessian Blue	
		 Duchess Blue #123 — 1928-29
RAL 5009	MAFCA Duchess Blue	PPG Duchess Blue
		 Orange #1166 — 1929-30
RAL 2010	MAFCA Orange	PPG Orange
		 Apple Green #519—1929-31, 35-36
RAL 6025	MAFCA Apple Green	PPG Apple Green

		PPG Not Available
RAL 3004	MAFCA Aurora Red	
		PPG Not Available
RAL 3004	MAFCA Rubylite	
		PPG Not Available
RAL 3001	MAFCA English Coach Vermilion	