

**BODY, PAINT,**

**GLASS, TOP,**

**INTERIOR,**

**WEATHERSTRIPPING,**

**ETC.**

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## SELECTING A COLOR AND A PAINT SYSTEM

The following is intended for both those who wish to do their own painting and those who will have it done professionally. In both cases remember three basic principals (1) time is money unless it is your time (2) the more steps and products used, the higher the cost in time and materials (3) 90% of the cost of a show quality paint job is in the final body work, leveling of primer-filler coats and in sanding and buffing the finish (if you go to the additional step of sanding and buffing).

After you have read the following and decided on a system, go to your local body shop supplier, not a discount auto parts store, and get all the information on each product they have. This overview can not go into such things as spraying pressures, mixing proportions, etc. which are fully covered in the literature. I think you will also be pleasantly surprised at the information available and how helpful the paint technicians can be. Many manufacturers such as Dupont and Ditzler also put out complete product line books and books that tell you how to paint and how to trouble shoot your problems/mistakes.

### COLOR SELECTION.

Color is a very personal thing. You may feel that not only the original color, but the original formula, must be used. For example, your Triumph TR 3 must be Signal Red lacquer, a hard formula to find. A bright red such as Porsche Guards Red, which is a current color is readily available in modern acrylic enamel or lacquer but it isn't original. If original is mandatory then you either have to find the formula or try to find some original paint which was protected from weather, undercoat staining, etc. and have the paint custom mixed to match it. Even then you're not out of the woods. For instance, I have the formula for MGA Old English White which can only be mixed in the old fashioned and troublesome nitro-cellulose lacquer or the equally troublesome alkyd enamel (more on these later). Incidentally,

British Racing Green is not a color. There are probably 50 to 100 different greens that have been used on British cars and even when a manufacturer labels it BRG, that doesn't mean a thing to the paint supplier without the formula. Conversely, you may have a car which only came in some drab or horrid color (the Brits were good at both. My MG TC was black with an apple green interior when new). How do you find "the" color? Well, there is the old adage that to win with an MG or a TR or a Jag it must be red. On the more practical side, here is a method for those that are not very good at visualizing. Try to find a car of similar shape and proportions (not necessarily size) and look at the colors used on it. For example, a Sunbeam Alpine/Tiger has roughly the same lines as the '57 Thunderbird which came in some pretty wild colors for the day. Or in the sedan arena, the Mercedes look Ford Granada. If a color similar to what you are considering can be seen on a similar car it can save you from making a terrible mistake or help you to decide on the "perfect" color. If you are totally undecided go to a shopping center on Saturday and just ride around looking at colors no matter what kind of car they are on. Another method is to paint a model. Now I know you don't want to paint your mint \$75 Matchbox MGA or Corgi TR 2. But there are thousands of Tootsie toy TDs, Jag 120s, and TR 3s out there that aren't good for anything else and will cost you about \$2. Lastly, do not rely on color chips in the paint dealers color books and above all do not trust a color in a sales brochure.

## BODY WORK.

Body work is a whole additional art within itself and we won't cover it here. However, I will say that it is far harder to learn than painting. Most people make the mistake of thinking they can save money by doing the body work then having a pro paint the car. After the nice shiney paint is on they discover the body work that looked straight to them in primer usually has more ins and outs than Marilyn Monroe. For those doing their own body work, I strongly suggest you take time to apply a thin

coat of gloss black to each panel. This will clearly show any waves, dents you missed, etc.. Make the paint as shiny as possible but don't build up a heavy film. Do this by using rather thin paint, good quality thinner, and careful application. Look closely and turn the panel or move your viewing position to several angles to make sure it is straight and wave free. Also trial fit the parts first. This is especially true with cars having no finish body panels between the hood and fenders and trunk and fenders such as Triumph TR 3s. It is pure Hell to find the beautiful paint job you just finished or paid for ruined because a door edge hits a fender when you open the door, or a fender edge has to be reshaped because it doesn't have the same curve as the body where they meet.

#### WHICH CHOICE COMES FIRST - THE BASE OR THE PAINT ?

Which base products ( primers, etching primers, sealers,etc.) you will use is somewhat dependent on which finish you chose. You may decide after reading the following that the finish you were absolutely convinced was the only way to go is going to take too much work and/or skill to do yourself or cost considerably more than you have budgeted. You are going to have to read through then back track to determine which of the considerable number of possible combinations best fits your skills, budget, etc.

One of the problems you face today is too many products. Years ago there were only two paints - nitro cellulose lacquer and alkyd enamel and you pretty much used the same products under both. I learned to paint with these and, believe me, you don't want to try. With nitro it is impossible to repair dark colors without a tell-tale ring. Rain drops will discolor it. It gets opaque and rainbows like an oil slick if put on in humid weather. Incidentally, this humidity problem also exist for acrylic lacquers discussed below. Nitro also dries very quickly and is hard to keep wet enough when spraying. There is only one good thing I can say about it - a black nitro job is the softest, richest black you'll ever see. Alkyd enamel is cheap and durable and has a good gloss. But you better be damn good and have a

dust and bug free paint area because it takes almost all day to dry. And, if you get a run in it you can't sand it out and repaint for about a week. Below we will go into most of the systems and variables within the systems using Dupont products for reference. Although you may find all the product numbers laborious reading, you'll find sorting out the multitude of products available more time consuming. Other products are just as good and in some instances you have more color choices. For example Ditzler has more fleet colors (colors not used for any specific vehicle) and Siken, a Dutch Urethane, comes in literally thousands of progressively changing shades. Before you rush to your Sikens dealer let me tell you it is very slow drying and difficult to use. Many pros won't touch it unless they can stick the car in an oven immediately.

#### **METAL PREPARATION AND PRIMING.**

The preparation - etching fillers, primers, etc. are the base of the job. If they aren't any good your money and time are wasted. For those having the job done, you'll have to trust the shop and you may want to skip ahead to the paint sections. For the do-it-yourselfer the base system depends to some degree on the finish you select. Basically, the primers and such for the "simpler" finishes - acrylic enamel and acrylic lacquer - are cheaper and there is less waste because they are "photochemical reactive", that is, dry by air and sunlight. Primers for some of the "exotic" finishes are two component which are hardened in a few hours or minutes by a catalyst additive. For a shop the wasted product costs for two component systems are relatively low because they shoot the whole car. However, for your small uses of priming a panel at a time or going back over spots the cost of waste can be relatively expensive.

To keep it simple and within the range of the most practical products here are the suggestions for primers and fillers.

Our economy job choice is washing bare metal with old fashioned Metal-Prep and its companion product Conversion Coating (or their equivalent for aluminum). Follow with one of

the single component (air dry) primers such as 181S or 100S listed below. There are cheaper primers such as lacquer primer-surfacers but they don't fill as well and tend to dry too quick causing a dusty coat with no adhesion. Thinner is important here also, as it is with the other primers listed below. Generally speaking the cheaper the thinner the quicker it dries. Thinners are available in three ranges of drying speed usually expressed as air temperature ranges such as 55° to 70°, 70° to 85°, and over 85°. Primers and primer-fillers must go on wet and "flash" dry ( get a dull opaque look) before the next coat. Here, and with all following steps, you must sand and 'tack' with a tack rag between applications (not necessarily between coats, because you can lay on several coats of primer at one time with only flash time between coats).

The next choice is the higher tech, higher cost, one step method. Start by washing with Dupont 3832S Enamel Reducer (for enamel the term is reducer, for lacquer it is thinner). Follow with equal parts of 615S Variprime and 616S Converter. This latter is a two component system. Although it supposedly has a three day life, the amateur will no doubt waste a fair amount of it.

In either case, the next step is the same - 181S (red oxide) or 131S (gray) Fill & Sand primer surfacer thinned with 3661S lacquer thinner. For aluminum this must be preceded by 2085 zinc chromate primer. Zinc chromate is very thin with little color and runs very easily. It will be a real test of your spraying skills. An alternate that can be used on aluminum or steel is 100S. And if you're really looking for a good old time product with good filling qualities and excellent long term life (aging) there is the enamel base alkyd resin primer 3055S Preparakote. Minor imperfections should now be filled with either a "glazing putty", which is an air dry product that will shrink many months hence, or an epoxy putty such as Evercoat Polyester Glazing Putty. The latter is highly recommended. After you're sure you have all the waves and nicks filled, apply 1984S, 1985S, or 1986S Velvaseal sealer in preparation for the finish paint.

Again, the above are only for the "simpler" finishes - acrylic enamel and acrylic lacquer. I say simple but some of the derivative systems of these can get pretty exotic as you'll see below. However, the preparation and priming are the same. For Imron, the product that seems to quicken the pulse of the unknowing and impressionable, the Variprime/Fill and Sand system can be used but a special two component primer, Corlar (translation = \$) is recommended. When you buy a gallon of Corlar or Imron you really only get 3 quarts. Then you have to buy the catalyst.

#### FINISH COLOR SYSTEMS.

The basic differences here are in labor and gloss. Enamels are cheapest and easiest to apply with good gloss. Lacquers have more softness and depth and are more forgiving of the amateur, but must be rubbed out. Clear coats add gloss. Imron and like products have durability and high gloss but a plastic look and are generally much harder to apply smoothly.

#### Centarl acrylic Enamel.

This is your basic durable one component paint. What you see is what you get, so to speak. It is thinned with one of three reducers ( 8096S hot weather, 8093S mild weather, 8022S cold weather). Acrylic enamels dry dust free in about 1/2 to 2 hours. They are the least expensive (except for alkyd enamel) and the "left overs" can be saved and used later if kept frozen or without oxygen (as in a full can). Repairs are more difficult than lacquer because the spot repair goes " on top" whereas lacquer "melts into" the old finish. There are two variables here. The first, addition of 782S hardener, is highly recommended but the left overs can't go back in the can because 782S is a catalytic hardener. The other is sanding smooth with 1200 or 1500 wet sandpaper and then buffing with polishing compound. Let me digress for a minute to explain why you may want to sand and buff. When paint is sprayed, it is literally thousands of little drops being splashed on the surface. These little drops flow together in theory and with skill. Depending on the degree of the splattering effect and flow (or lack thereof)



Irregularities are left in the surface resembling the skin of an orange- hence the term "orange peel". On the other hand, if applied too lightly the paint will go on dry and dusty looking. By lightly sanding you can remove the orange peel or rough surface and then obtain a smooth surface by buffing out the sanding scratches. If you are going to do the latter make sure you put on enough paint. If you spray light coats this may be 5 coats as opposed to 3 heavy wet coats. The resulting finish is very nice with high gloss and easy to care for. This is what I recommend for the "driven" car.

#### Centari 2000.

A lot of todays paints are formulated to make up for the lack of skill of the painter in getting single stage paint on smooth enough to have a decent gloss and this is a good example. This is Centari with two gloss additives which essentially put more clear (which gives gloss) into the mix. For the do-it-yourselfer I see no advantages and I really don't know any pros using it.

#### Centari Basemaker Base/Clear System.

This is a two stage system which is especially good for metallics. However, the two stages require more than two components. As with 2000, it makes up for skill. Many of todays metallics are translucent and it is virtually impossible to get them on in single stage paints without the metallic sagging or running. The base color coat mixed with 8280S (warm weather) or 8260S (cool weather) Basemaker and 782S Activator can be applied virtually without regard for smoothness. It just has to be uniform, especially if metallic. Follow after sufficient drying time (1 to 4 hours) with 780S clear and 782S. The clear can then be "poured" on and if any runs occur they can be easily sanded out and buffed within a few days. This system is very time sensitive because the clear can soften the base and make it sag, but it allows the less skilled painter to put the color on with virtually no risk of runs or dull, dry finish. It is a Godsend for the amateur using metallics. It will also give more gloss than Centuri, especially if sanded and buffed.

### **Speedy Basemaker/Clear.**

This is the second generation Basemaker. As with other paints, it is the next step in the never ending search for better finish quality with less user skill and at lower material and/or labor cost. The advantages of Speedy Basemaker over the Basemaker system are (1) no activator in the base coat (2) the color coat can be cleared in 5 to 15 minutes with either 780S Centari Clear or 1080S Euro Clear.

In my opinion the Basemaker or Speedy Basemaker system is the only way to go, especially for metallics, on high quality daily driven type cars. It will give you lots of gloss but it will not give you the depth of a lacquer or lacquer/clear job.

### **Uro Clear and Cronar.**

I will mention these only briefly because they are rather specialized systems which can be used separately or in combination with Centari and each other. The Uro system also includes a high fill primer. Uro dries quicker than any other urethane clear and supposedly give more gloss than Centari Clear. For our purposes, consider it a variable of Centari Base/Clear. The Cronar system's biggest advantage is that it is isocyanate-free. This is the nasty stuff that does you in with products like Imron. Cronar has superior flowout and gloss. In single stage form, the enamel is mixed with 9404S Initiator and 9475S or two slower drying reducers. In two stage form, Cronar Base is mixed with 9365S or 9385S Basemaker and followed about 30 minutes later with 9500S Cronar Clear, 9504S Initiator, and 9575S or slower Catalytic Reducer.

### **Lucite Acrylic Lacquer.**

Now we move from the enamels and urethane enamels into a whole different type of paint. Acrylic lacquer has a softer and deeper look than enamel. However, it chips and cracks easier and at an earlier age than enamel. As with single stage enamel, you have an easily used, put it back in the can product. Lacquer is very forgiving for the amateur and for repairs. If repairs are

skillfully done the new paint actually softens and bonds into the old (within limits). You only need to decide on the correct thinner for the temperature , 3696S hot weather, or 3602S cool, and perhaps some retarder. Most people put lacquer on too dry. It should go on wet and flow out, then glaze over with a slightly opaque look. Runs and mistakes are easily sanded out the next day and then the whole job can be buffed (all lacquer jobs must be rubbed out). An older product that helps with flow and gloss is 300S Uniforming Finish. It appears to be a combination clear coat and retarder and it is especially usefull to the relatively unskilled in blending a repair. No hardeners or special additives are needed. This system is my recommendation for the "class" show car or pampered street machine. If you want to blind them with glare, add a couple of final clear coats or move on to Imron and Cronar.

#### Lucite Basemaker Base/Clear System.

Here again we are into a system with variables, two component products, and more products to buy. Lucite Base Color is mixed with 8375S Basemaker or 3602S thinner. The clear coat can either be 380S Acrylic Clear Lacquer or 580S Urethane Clear Enamel with 582S Activator. The latter offers little if any advantage over the Centari/Clear system.

#### Imron.

What gave this product its great reputation was superior gloss and "hardness". However, this was in the days when clear coating was only done on Mercedes and a few other European cars. The "hardness" however still remains superior to anything readily available. Actually, it isn't hard. It is resilient and that is why it doesn't chip. If you were to examine a golf ball size mass of Imron, you'd find it would bounce just like the ball. With all the above products you start with a gallon of product and add thinners, activators, etc. However, with Imron, you get 3 quarts and add a pint of 195S Activator and a pint of 8575S or slower reducer to get a gallon of ready-to-spray product. Imron 500S Clear is now available for even more gloss. In my opinion, Imron has a plastic look

especially with dark colors and there is little reason to use it in light of its cost and the new base/clear systems. However, one area where it does excel is on frames and inner fenders which are exposed to stone chipping and fuel.

#### **SAFETY.**

Back in "the good old days" most painters sprayed without even a dust mask. With enamel your nose got full of sticky paint and with lacquer your lungs felt a little raw but, what the hell, we were tough. Today you might get by without a mask for the basic products if you are outside but for the urethanes and polyurethanes a cannister mask is mandatory. Once your lungs are coated with Imron it is very difficult to breath. Even if the film doesn't get you, the isocyanates will. Today, professionals even wear sealed full body coverage with hose fed fresh air. To put it as bluntly as possible, you don't get a second chance with this stuff. Read the product labels carefully and use the recommended correct OSHA approved safety equipment.

## CORRECT SILVER OR MORE SILVER SILVER FOR YOUR WHEELS

If you're about to refinish your wheels you'll find there is no paint formula available for the wheels. Contrary to what you may think, silver ain't silver, so to speak. For example, General Motors silvers of the late '70s looked fine on a car but had a slight purplish cast when on a wheel. For those looking for the closest silver to the original, '74-'78 Ford Silver Poly (code 1G) applied a little wet is perfect. So much for purists.

For those who want a little more silver, try '75-'77 Porsche/VW Diamond Silver Poly (code L-97A). Ditzler's number is DAR2803 and Dupont's number is 43881AX. For some real sparkle, use Dupont Centari Basemaker base coat 43881-AWX, '75 Volkswagen Code LE7Y, followed by Centari Clear. Both the base and clear must have 782S Activator added.

Be sure you use a mask in accordance with the instructions on the paint product containers when spraying the above or any urethane type paint.

## DOOR HANDLE ESCUTCHEON PROBLEM

Take a good look at those black plastic things behind your door and window handles before you order new ones. The replacement (6233843) is about twice as thick. The alternative is to cut or file it down (life's too short).

## WINDSCREEN TO DOOR GLASS SEALS

You originality types be forewarned. The replacement seal #620913 is considerably different than the original. It is larger in diameter and is foam rubber. This is not to imply it is unsatisfactory. It is not. In fact, considering the fit of some windows, it might be better. I do find the price (about \$6 a foot when most weatherstrip run \$1 to \$2 a foot) unreasonable. But then I always was a cheap bastard.