



A [TechnicalHelp4U.com](http://TechnicalHelp4U.com) presentation:

## How to prepare my parts for powder coating

(or how to save \$\$\$ on your powder job)

So you have the '67 Mustang almost completely restored and want to get some parts powder coated by Joe's Powder coating shop down the street. **STOP!**

Before you turn over your trusted parts to just anyone there are some key things you can do to reduce the cost of the job, and more importantly some basic things you should ask Joe before you contract him to do the job. Keep in mind these pointers are good for anything you may want powder coated, fencing, computer housings, lamps etc..

**What qualifies us to give advice on powder coating automotive parts in particular?**

- We set up the program for GM to powder coat their V6 engine blocks. Trained the chosen job shops.
- Assisted Delphi Automotive in powder coating brake calipers successfully
- Showed and set up IR line for PBR to powder coat brake calipers
- Developed powder coating process for Harrison Radiator.
- Worked extensively with Torrington to set up powder coating process for heat sensitive steering columns
- Assisted Bendix with coating process for their brake pads
- Should we go on to discuss Ford, Einke, Chrysler, water pumps, Fram Filters or Jeep Gold wheels?
- How about the dozens of job shops doing custom work for major race car teams, professional auto refinishers and custom motorcycle manufacturers?

**We know this industry like no other!**

## Successfully powder coating your parts depends on:

1. Part Selection
2. Part Preparation
3. Part Pretreatment
4. Proper Powder Selection
5. Proper Application and Cure

### *Part Selection, or, what can I get powder coated?*

- Valve covers, brake calipers, radiators, brackets or the entire frame of the car.

Any part, which can withstand the cure (bake) temperature (~350F) of the powder can be powder coated.

### **This means watch out for parts with:**

- Electronic components
- Bearings you cannot replace
- Heat sensitive parts such as most plastics
- Parts with internal workings you cannot remove, ie. alternator.

### *Part Preparation involves:*

- Removing all items from the part to be powder coated such as:  
Gaskets, Bearings, Brackets
- Strip the old paint from the part: Bead/sand blast, sanding paper or use Chemicals
- Completely clean the part using an industrial solvent (Methyl Ethyl Ketone – MEK, or a vapor degreaser, MEK is available at most paint stores)

*\* Note: Handling after this must be minimized. Do not touch the part with your bare hands as the oils from your hands can cause defects in the finish. We encourage the use of cotton gloves.*

- Mask areas of the part you do not want powder coated. Keep in mind that with the right powder selection, the powder coated areas

can be machined clean. Engine blocks are machined (gasket surfaces, cylinders and bolt taps) after the block is powder coated. Use high temp green tape (Shercon [www.shercon.com](http://www.shercon.com) ) for the areas you do not want to machine after coating.

- Use Silicone plugs and caps for masking bolt taps and attached screws/bolts. Available from Shercon as well as from [www.mocap.com](http://www.mocap.com). Either company is willing to send you samples.

### Now your part is ready for the powder coating job shop!

Your selection of a powder job shop is absolutely critical! The wrong job shop can ruin your part or put on a finish which will degrade and need removal, cleaning and recoating within a short period of time.

An inferior, low end, powder coater will have no pretreatment capabilities. THEY WILL NEVER GET A JOB FROM A MAJOR COMPANY for this reason! I can guarantee this. They will tell you that you can take that part as is and have a quality, lasting finish on it.

**[This is an outright lie or they are incompetent!](#)**

There is a reason why all automotive and motorcycle manufacturers specify part pretreatment in their powder coating specifications.

What is pretreatment? Our CD explains this more in depth, and if you are planning on powder coating parts, you really should pick up a copy of our Powder Coating 101. Basically, pretreatment is a process which cleans all contaminants from the surface and then causes a chemical reaction which assists paint adhesion and prevents parts from corroding (rusting). You don't want rusted parts, do you?

- *For Steel parts an Iron Phosphate  $FePo_4$  is required*
- *For Aluminum parts a chromated/fluorinated system is required*
- *For Magnesium parts an acid wash is required*

Pretreatment adds life to your part at minimal cost. Beware the un-pretreated part! No one can warranty it.

### *So, what do you want to ask a prospective job shop?*

Is pretreatment included in the price? What kind and how many stages? (the more stages the better)

What powder coating chemistry are you going to apply? More on powder chemistries in our CD. Most underbody/underhood applications are with Epoxy powder coatings, most exterior applications are with TGIC or GMA Acrylic.

How do you ensure my part will be properly cured? Do you run oven profiles?

What major company do you powder coat for?

What do you do if the part needs to be re-coated?

What if my part rusts within the first two years? If it fades in the first 3 years? There are powder coatings which can last up to 10 years with no fading or gloss loss!

Don't let yourself feel intimidated by the job shop, make sure you check with at least 2 or 3 different ones, call a large outfit in your area and feel free to call any powder coating manufacturer. Ensure you know all the facts before you contract out your job, no matter how small. After all, you put a lot of work into your project. The last thing you want is for some bozo hillbilly powder shop to force you to redo your work a year later because it is faded, rusting and peeling.

Good Luck and keep in mind that our [Powder 101 CD](#) can help make you a more educated consumer!

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