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Your questions answered by  member experts.

*You have questions, we have answers. In each issue of PCT, our extensive network of powder coating experts provides information to help you with your powder coating challenges. Let us know what's keeping you up at night and we'll do our best to help you get a good night's sleep!*

## Too Hot to Handle

**Where can I find information on fire protection requirements for a manual powder booth?**

The best place to find information on any powder coating related fire protection requirements would be the National Fire Protection Association's "NFPA 33 Standard for Spray Application Using Flammable or Combustible Materials." Specifically, Chapter 15 covers powder coating. You can also check with your local Authority Having Jurisdiction (AHJ).

## Can I Quote You on That?

**We need to send parts out to a powder coater for a customer. What information do I need to give to them so I can get a good quote and the part gets the type of coating it needs?**

There are a variety of factors involved in quoting a powder coat job. Some of the primary information you should provide to your powder coater includes the type of substrate(s) they will be coating (the quality of the substrate also plays a role); part drawings with dimensions; quantity; masking requirements; color matching requirements; quality specifications (OEM, AAMA, DOT, etc.); deadline; and if the parts will be delivered and picked up. Other items of key importance are related to performance. What is the end use of the product? Will it be outdoors and subjected to the elements, or will it be indoors, as well as any other durability requirements and environmental considerations. The more

information you can provide your powder coater the more accurate your pricing will be and the fewer surprises after the product is coated. Be sure to keep a copy of the information supplied to the powder coater so you have documentation of your requested specifications.

## Something's Fishy in our Finish

**We've been powder coating a particular job for years with no issue. Suddenly we started seeing fisheyes in the finish. We've reviewed all our processes and the only change we've made is having an outside company wash our rags. Could there be a connection between outsourcing this service and the sudden appearance of fisheyes?**

It might seem crazy, but you may have found the cause of your fisheye issue. The simplest of changes, including using a rag cleaning service, can result in powder coat defects. Be particularly careful of oils, perfumes, and aerosols as they can also cause fisheyes and other coating defects. We've even heard of a company that when their air tools need oiling, chooses to replace them entirely rather than risk oil-related defects. Stop sending out the rags to be cleaned and see if this solves the problem.

## Honey, Does This Match?

**We occasionally run across a customer who requests that we match a powder coating to a liquid paint. Is this possible? If so, what is the best way to ensure an accurate color match when converting a liquid paint color to a powder coating?**

The first question you should ask is if they know the RAL number of the liquid paint. If they do, then this can be used to match a powder to it. Second, show the customer what stock colors you have that may be close to what they are looking for, but be sure to have them pick the color. Never pick a color for a customer, especially if they say they trust your judgement. It is a surefire way find out your judgment is impaired! Third, you can submit a sample of the liquid paint to your powder supplier, and they can use a data color reader to determine the parameters of the sample. This will then compare the Delta E (the level of difference between the displayed color and the original color) standard of the inputted parameters. Lower Delta E figures indicate greater accuracy, while high Delta E levels indicate a significant mismatch. They can then try and match to an available powder. If an exact match is needed, the

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powder manufacturer would then have to formulate a custom powder. This option is pricy, takes time, and usually requires a minimum batch size that is typically above the needs for the project, resulting in extra, unused powder that sits on a shelf in inventory.

## You Crack Me Up

***I have a customer that requires a chrome powder coat finish on their parts. We don't have a lot of experience coating with this type of powder and are getting cracks in the final coating. What are we doing wrong and are there other considerations to keep in mind when using chrome powders?***

Using powder to achieve a chrome finish can be tricky until you get the hang of it. Cracking can occur in a powder coated chrome finish just as it can during the electroplating process, but the causes are different. Overcuring is a very common reason you would experience cracks in a powder coated finish, so you should check with your powder supplier to make sure you are curing the powder at the correct temperatures and timeframes. If you're still having issues, test your oven to ensure uniform curing temperatures in all areas of your oven. Overcuring can also cause color changes, so keep an eye out for that as well. If you begin to see ripples or wrinkles in the chrome finish, you've gone too far the other way; these problems are commonly caused by undercuring.

## Making an Impact

***We need to know if there are any guidelines to correlate impact test results with real world performance? For example, XX ft-lbs would equate to a ¼ in hail or YY ft-lbs is considered "tough," etc.***

There isn't a direct correlation between impact and hail. However, we would say that standard durable polyesters can easily achieve 160/160 in.-lbs. of impact performance but have limited weathering performance. Superdurable polyesters can achieve 120/120 in.-lbs. of impact performance and have significantly improved weathering performance. Not all superdurables will have this; most superdurable polyesters have significantly reduced impact performance. You would need to check the technical data sheet (TDS) to determine if any particular superdurable has what you are looking for or contact your powder manufacturer for advice. Another option would be to consider utilizing a Gravelometer and follow the ASTM D-3170 "Standard Test Method for Chipping Resistance of Coatings" guidelines.

*Have a question for our powder coating experts? Send it to [asktheexperts@powdercoating.org](mailto:asktheexperts@powdercoating.org).*

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