

# Perfect Polish

The Making of a Product — Not so Easy

By Kevin Farrell

**A** reader, who recently read an article in *Auto Laundry News* that I had written, contacted me regarding that article and other related detailing issues. His name is David Ghodoussi, Ph.D., president and CEO of Optimum Polymer Technologies in Memphis, TN. We had a great chat about various subjects. One of the subjects we discussed was buffing products.

During our conversation, David told me that he wanted to add a polish and a compound to his product line. He wanted it to be the best possible product ever to hit the market and to fit in with the rest of his product line. To achieve this goal, he needed some input and direction from a detailer's point of view. He invited me to collaborate with him in creating this polish. This offer was different and excited me. I periodically receive calls from companies who read my articles and offer their products to me to evaluate. The only problem is that they are already finished products. I usually have some suggestions as to how it could be a better overall product, but the company has already manufactured it and just wanted my opinion. In this instance, David offered me an opportunity to partner with him and create — *from scratch* — a polish that would perform to all my specifications to make a vehicle look flawless. I felt like a kid in a candy store.

I promptly accepted this offer and e-mailed David my article that appeared in the June 2004 issue of *Auto Laundry News*, which outlined my specifications and

expectations of buffing products. This enabled him to review my expectations of a product, making sure we would be on the same page with this project — to determine whether the “perfect polish” could be created.

I have tried many polishes over the years with varying degrees of success. I have never found one to be perfect. It seemed that the polishes that were a dream to buff with didn't remove imperfections or swirls very well. The same holds true for polishes that gave the car a great gloss. They were not

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aggressive enough. The polishes that were more aggressive didn't shine as well, left too many swirls, or were difficult to use. Some polishes evaporated very quickly, while some left a greasy mess. There is always this fine line you walk concerning buffing products. If it seems to satisfy one concern, it most likely creates another.

## SIMILAR VIEWPOINTS

David and I did agree that a detailer really needs only one polish and one compound to make a car look like new. Combine a great product with the correct choice of buffing pads and speed of the buffer, and you eliminate a lot of confusion. So once David

knew what I wanted, he had to go about creating this “perfect polish.”

A small problem we had was that we are not that close geographically. I am located in New Jersey, while he operates out of Tennessee. So getting together to test and demo some prototypes really was not an option. This made verbal communication critical to accomplishing our goal. We discussed the feasibility of what I wanted, from a chemical viewpoint. I was concerned that what I would request, would not be possible and that compromises would have to be made. However, I told David that I would be extremely picky and demanding regarding overall performance of this polish. He response was “whatever it takes to make it perfect.” Music to my ears!

## LET THE GAMES BEGIN!

I assumed that with the hours of discussions and volume of e-mails we exchanged before the first sample was even created this would be a piece of cake! We talked about the types of abrasives that could be used, the different solvents and combinations of solvents, emulsifiers, consistency of the product, etc. I felt like I was a chemist! I thought that because of these detailed discussions, David would send me two or three samples — I would try them out on a number of cars and pick one. Game over! But, not so fast — and not so easy.

I was excited to see the first three samples arrive and hurriedly opened the package just to look at



Samples, samples, and more samples. It took 42 of these to arrive at a final choice.

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the product. I quickly grabbed the buffer and chose a pad and got to work. My excitement quickly turned to puzzlement and dejection when these samples didn't perform anywhere near the way I wanted and needed them to. These initial samples were awful. But I knew why they were awful. My job was to relay this information to David so he could correct the problems.

The first prototypes were far too aggressive and left far too much dust on the car. While they did a great job of eliminating scratches, they left swirl marks behind. Not good for a final polish! I called David to give him the mostly bad news about the first round of samples. We discussed in detail what was good about the samples

(not very much) and what was bad about the samples (a whole lot). I had to be as honest as possible with my feedback if we were going to get somewhere. David also needed me to be totally blunt and not to hold anything back.

### NOT SO EASY AFTER ALL

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I realized that this project was not going to be easy. I knew immediately — from the first few samples — that the product needed a lot of work. The original samples were too aggressive and created too much dust. They also didn't have good consistency. They separated and ran down a vertical panel. They also dried up and caked on the car. David explained to me what he would do for the next round of samples based on my criteria and feedback of the previous samples. I anxiously waited for the next formulation. The samples I received a few days later were a bit less aggressive but I still had a swirl mark problem.

They also still separated a bit when applied on a vertical panel. These were still major concerns for me. At this point, we were only taking baby steps toward improving the product.

Again I gave my detailed feedback to David and we discussed our options for improving the formulation. He had a game plan also. He wanted to eliminate some things that maybe he thought would not work in the product. He wanted to push the envelope as far as aggressiveness was concerned and see what it would do. He wanted to try different solvent combinations and percentages. This was all part of the necessary growing pains in creating this product.

### MORE CONCERNS

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As we corrected one problem that I encountered with a previous sample, it seemed another would creep up. For example, one batch of samples was not giving me the desired results with regard to the look of the paint, but it seemed to buff well. It also sucked into the pad well, did not splatter out of the pad, and did not cake up on the panel. A following set of samples made the paint look far better, but all of a sudden I noticed the polish ran away from the pad on a vertical panel and down into a molding or emblem. It also was now splattering because it ran to the outer edge of the pad.

As frustrated as we both were getting, David still knew how to fix the problems. I just kept giving him my honest opinion about the product's performance.

### GETTING SOMEWHERE

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Not long after we reached the pinnacle of our frustrations, the

samples started getting better and better. I found the aggressiveness of the product to be far better than most polishes. These samples were removing imperfections that I would expect of a compound. I started putting light scratches on cars and lightly wet sanding panels to see what these new samples would get out. I was removing 1500 sand scratches with a medium foam pad at very low speeds on the buffer. I thought there would be swirl marks because of the aggressiveness. I cleaned the panels and brought the car out into direct sunlight. I nearly blinded myself searching for swirls. There were none to be found on countless cars I buffed, many of which were black. The gloss was also perfect on all the vehicles.

While the aggressiveness of the

product and lack of swirls were fantastic features of this new polish, there were still some issues. I wanted the product to have a longer buffing time. It was hazing and drying too quickly for my liking. It was still creating a bit of dust with medium foam pads and at slightly higher speeds on the buffer. It was also creating a bit too much heat on the panel. The product was coming along, but it was still not the “perfect polish.”

### OOPS, WRONG WAY

I was excited to see the product improving. I needed David to address the hazing and dusting problems, and he did. The only thing was it went too far in the other direction. The dusting problem was

solved. The problem of the product running away from the pad was solved. The heat problem was solved. The consistency of the product was great. It removed some major imperfections without swirl marks. However, it was now far too greasy! I couldn't see what I was doing because there was way too much oily residue on the panel as I buffed. I also had a difficult time removing the residue from the panel even with a damp microfiber towel. I didn't like this either. On the plus side, when the oily residue was finally removed from the panel, the panel was perfect.

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product in and correct the oily problem. I nit-picked it to the very end. We fine-tuned and adjusted it to give it the perfect balance and utmost performance.

I narrowed it down to the last two samples and exhaustively tested them with all different pads and various speeds on the buffer. I worked on various types of clear-coat systems and a varying degree of vehicle makes and models. I used these final samples also on single stage paint systems and on refinish paint. I made sure the product worked well in all situations and produced flawless results. All told, we needed 42 different samples or prototypes and 8 months of testing to produce the final product. I finally chose from the last two samples the product that was the absolute best.

### MEET THE PERFECT POLISH

The final product is a polish that I am confident in and I will use everyday in my detail shop and in my training classes. The specifications that I asked for in this product are there, and it meets the criteria I set. It is more aggressive than a typical polish. It removes some heavy scuffs, scratches, and even sand scratch marks. It does not leave swirl marks if used with most foam pads at less than 1,500 rpm on the high-speed buffer. It can be used with virtually any type of buffing pad to make it more or less aggressive. It will produce an awesome gloss regardless of the buffing pad you choose. It has an unlimited working time and will not dry at all or get dusty. It will not cake and gum up the buffing pad. Due to its

unlimited working time, it is more detailer friendly.

There is far less chance of burning the paint or even moldings and trim with this polish. It will also polish many black trim moldings and hard plastic trim. It will also polish and shine some soft rubber moldings, which will eliminate the need for dressing those items. It will not splatter if used somewhat sparingly. It can and will save time in the buffing process. Because of its aggressive nature with very limited swirls, a detailer may be able to eliminate a buffing step altogether. This product is also body shop safe. To test this aspect of the polish, I cleaned a panel with the polish immediately before I painted it. There were no fish eyes or craters in the finished paint job.