

Alternative to Powder

by Brian McCarthy

I have recently used a product on my chassis and a few other components, which may be of interest to some club members who are still building their cars or working a rebuild.

Back, waaaaay back, when I purchased my chassis from Ray Christopher at GTD, we knew that we would be cutting and welding the chassis to suit some minor modifications, with that in mind we decided not to have the chassis coated at the factory.

Time forward to now, having finished cutting, grinding and welding, the chassis needs a protective coating applied to halt corrosion. My first thoughts were to use a powder coating facility. So I called and emailed vendors within driving distance, but none would not return my calls or respond to email, so much for powder.

An Internet search for coatings lead me to Chassis Saver, a material from Magnet Paints in New York at magnetpaints.com. I called and spoke to them with regards to my project and they sent me product literature along with a small sample of material.

Although produced for the heavy trucking and industrial market, I was assured that it would be suitable for my application. Interesting stuff this Chassis Saver is, as hard as ceramic, yet flexible; I could bend the sample of coated material 90 degrees and hit it with a wrench without breaking it from the substrate. So I decided, lets give it a go. Chassis saver is available in black and silver-aluminum and for this project we ordered three quarts of silver-aluminum and a quart of reducer. Ninety dollars and a week or so later, I had product in hand.



THE PROCESS -

Surface Preparation: The application instructions are insistent upon ensuring a clean substrate with “tooth” for the material to adhere to. It specifically indicates that etching compounds do not provide an adequate surface profile for the material to bond with. To suit these requirements, I used an angle grinder with 60 grit “flapper discs” on all of the flat spots and gave the welds an aggressive sandblast treatment. In the enclosed photograph of the rear cross members you can see just how rough I left the metal. Subsequent to the blasting and grinding, all surfaces to be coated were wiped down with a pre-painting solvent called Final Wipe.



Cross-Members Carefully Prepared



The chassis preparation was no small task, I would guess it took ten hours to prepare the chassis and associated pieces for coating.

Application: A short nap roller and a variety of brushes were used to apply the material, after the first coat had dried; it was scuffed with a Scotchbright pad and recoated the following week..

Scotchbright is like a plastic steel wool embedded with abrasive particles, it readily cut the gloss down to ensure the second coating would bond properly. Subsequent to the second coat, I tried dry fitting some bolts through the suspension mounting points and discovered that the holes in the chassis had been partially filled in with material. To correct that I had to file out the holes and apply a thin coating where bolts pass through the chassis.

The results: as you can see in the enclosed photographs, Chassis Saver is self-leveling surface coating, which provides excellent coverage and dries to a uniform high gloss.

For a first time user, I think the results are remarkable. If someone were to use this on a regular basis in a production shop environment, the quality achievable would be outstanding.



Pros and cons.

Cons:

Chassis Saver is really nasty stuff; its solvent-based reducers really smell quite bad. I did my chassis in the drive, out and away from the garage. If the fumes could get into the house, I am sure it would be very dangerous. Also the material is slick, almost greasy and will dissolve some plastics.



Super Smooth Finish

A high level of self-protection is required, one-piece disposable suit, gloves, face protection, etc. I did not spray, but the instructions indicate that you can with proper breathing protection. Each coat of Chassis Saver consumed about 25 sets of nylon disposable gloves, several short nap rollers and a handful of brushes.

It is a time consuming process, I would guess that surface preparation and product application took about 4 days to complete. The chassis is a jungle of tubes and plates and to ensure complete coverage is a tedious exercise, I still have some touch up to do.

Chassis Saver is not for use on aluminum and the surface gloss will degrade upon exposure to UV, however the protective qualities will not diminish.

Once you open the can, the curing process starts. Chassis Saver cures upon exposure to

the atmosphere, the addition of humidity and increasing the temperature accelerates the process. Shelf life of an opened container can be extended by “floating” a half-inch or so of its reducer on top of the material in the can. But as I found out, “floating” the reducer properly is very difficult. So once you open the can, plan on using it all within a matter of days, because it will cure like an epoxy.

Pros:

It is cheap, coating the complete chassis and associated parts cost around a hundred bucks, including sandblasting media, sanding discs, protective gear, bushes, rollers, and the Chassis Saver paint. Although I purchased three quarts, it actually took substantially less than two quarts to apply two coats to all surfaces. Being “economically challenged”, for me this was a real bargain. However, if you were paying someone 40 bucks an hour to do the work, it may be a different story in the long run.

It looks great, as you can see in the photographs; the resulting finish is top notch.



Be sure to allow enough time if coating a complete chassis

The manufacturer claims it to be impervious to nearly anything that can be thrown at it including road salts, gasoline, diesel fuel, battery acid, hydraulic fluids, solvents, chemicals and corrosives. Lastly, it is non-porous and flexible.

It can be repaired if you cut or weld through it.

After about a week of curing, the surface of the finish is really quite hard and scratch resistant. As rugged as powder?, I don't know yet. We'll know more as we perform the final assembly process.

The verdict? I would use chassis saver again as an alternative to other finishes but would only recommend it with reservations to other potential users. Don't start a coating job like this without having all of the proper tools and safety gear on hand including a well-ventilated work area and an adequate amount of time to do a proper job.. *Looks like **Chassis Saver** gets a thumbs-up then, great review Brian– Ed*