



Not sure if I have ever posted this here or not. Here is why the Red Oxide primer works so well at stopping out gassing and why it must be sprayed hot to help with out gassing.

FULL CURE SCHEDULE 462F/1 MIN

or 438F/2 MIN

or 400F/5 MIN

or 375F/10 MIN @ PMT (PART METAL TEMPERATURE)

As you can see from the cure schedule it is very broad. Out gassing occurs as the pores in the substrate open during the heat cycle allowing gasses and contaminants to leech from the pores. This usually happens during while the powder is in its flow state and just before or as the powder begins to gel. When the gel stage begins the gasses are escaping causing bubbles in the flowed out powder and they will not have time to level out or seal the pores of the metal. This is why even if you sand them down and shoot again the bubbles usually return.

Ok now if you have a part that is prone to out gassing You want to heat it up to the point you feel comfortable above 400 deg and shoot the RO straight out of the oven. Most of the gasses will have already been released from the pores and the RO can flow and seal them as it is applied and is flowed and gelling on contact. On Thick parts that maintain their heat longer I have actually left them out of the oven and allowed them to cool outside the oven because they PMT stayed above the required cure temp long enough to fully cure the powder without returning it to the oven. For example if you were coating a cast iron intake if you heat it to 450 deg and spray on the RO at 450 it would only take between 1 & 2 minutes for the powder to fully cure. I doubt in the PMT would drop below the cure temp in the time it would take it to fully cure.

Two additional things to keep in mind when using RO. 1. If you are using it to help with out gassing you must fully cure it or the out gassing could still occur after top coating it. 2. Fully curing the RO means you must scuff or sand it to guarantee adhesion between coats.

The instruction do say to partially cure 30-70% but we are using the product to help with a problem it was not designed to be used for. It just happens to have properties that help us eliminate most out gassing issues but with a trade off of some additional prep for the next coat.

