

Successful Metal Parts Cleaning at Room Temperature Session Questions and Answers

Q: You mentioned that the pumps and/or process can increase the temperature of the process. Can you please explain more?

A: As you turn on any process, but specifically spray, maybe your pumps are going to create shear and that shear is going to create inorganic heat. With some time, it will heat up the wash bath and the temperature of the bath. Typically, it doesn't heat it up a whole lot, but again it depends on the size of your tank and pumps. Generally you might see 120° maybe up to 130° F but again that's after running it all day, times zero it's going to be room temperature depending on where you live.

Q: Is there a temperature that defoamer needs to achieve before it becomes active? Would that tell me the lowest temperature I should wash at?

A: Well, so I'll answer the first question slightly differently. Many aqueous cleaning chemistries will foam at room temperature and they do have defoamers that are more active or will activate at a certain temperature. So typically you need to heat the wash bath up depending on the typical aqueous chemistry up to 120° maybe 130° F before those defoamers activate. Having a low temperature product that doesn't need temperature to activate is important.

Q: Besides energy savings, why else would you clean at room temperature?

A: Energy savings is one piece, but there's a number of other things and I'll miss some and I'll get some, but ones that come to mind right away is, as those parts come off the washer, are they being handled by people? If so and the parts are too hot, you can't actually handle them. Another that comes to mind very quickly is if you're measuring dimensions or quality or specific size dimensions, if your parts are too hot then you can't do that immediately and you have to take time for those to cool. Another one that we see as a problem and often get called in on is somebody takes a hot part and that goes into some sort of packaging almost immediately, specifically some sort of plastic packaging. What happens there is as the parts cool off, the humidity in the air will condensate all over those parts and create all kinds of mess. That's a few that come to my mind really quickly, but there are certainly more.

Q: Do most aqueous cleaning chemicals really foam at temperature?

A: Unfortunately, yes. The large number of aqueous cleaning chemistries do foam at room temperature. Some of them don't need a lot, but a lot of times the defoamers that are used in there require a little bit of temperature maybe 110-130° F degrees before they activate. So there's a lot of chemistries out there that at room temperature will definitely foam.