

The Benefits of Passivation on Stainless Steel

Session Questions and Answers

Q: What if the parts I'm already cleaning brass products and another cleaning. I would invest in the passivation line. Could I run the brass parts the same washer as the stainless steel?

A: Good question and the short answer is yes, you definitely can. The active passivation of the stainless steel uses the same parameters to passivate the brass parts, which it's not really passivating them, but it's cleaning them and brightening them. What I will caution you against is that citric acid removes more of the surface of brass parts than it does of stainless-steel parts in the same amount of time. So, if you are passivating parts getting through several different cycles, then you start to introduce brass. Your bath is going to go quicker, so you'll have to replace baths more often with brass involved. With that being said, if you're going to have one passivation line and then a brass line using citric acid, you're going to have to replace the brass one more often anyways. That's just something to be aware of.

Q: You mostly referred to using citric acid as the passivator, could you receive the same passivation benefits by using nitric acid?

A: Another good question, and yes, as far as benefits and effective passivators, nitric acid is an effective passivator. Citric acid is where you're going to run into issues. There's a lot more codes that you have to abide by if you're going to use nitric acid than you would with citric acid. When it comes to the effectiveness, yes, there you will get. You will get effective results using nitric acid as well.

Q: What types of PPE are required when using a citric acid product for passivation?

A: I'm glad this question was asked, actually, and we recommend just like with all of our products to wear safety glasses and some nitrile gloves when handling any of these chemicals. However, the citric acid is a relatively mild acid when it comes to acids. I mean, there's citric acid in Coca-Cola, so you're putting that in your mouth on a daily basis, it's not necessarily a harmful chemical. I would recommend taking precautions, on the other hand, with nitric acid as it is completely different. A lot of people and a lot of states require respirators, especially if the emissions aren't under control if you're going to be using nitric acid. So, there's just more PPE requirements and things to consider if you're using nitric acid.