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# Spotless<sup>TM</sup> CitraPass SS

## **Stainless Steel Passivation**

Spotless<sup>TM</sup> CitraPass SS is a passivating organic acid that effectively removes all free iron from the surface and stimulates growth of a passive oxide layer on the surface to protect the substrate from corrosion. Passivation forms an oxide layer on the metal surface to improve and protect the substrate from corrosion preventing bulk degradation. Stainless steel alloys have the capability to self-passivate; however, the surface must first be clean of any free iron, sulfides and other foreign matters of contamination. This product is environmentally friendly alternative to more toxic mineral acids such as nitric acid. The simple to use, one-component system allows for easy handling and hassle-free water treatment and disposal. The ingredients in Spotless<sup>TM</sup> CitraPass SS are all biodegradable with enhanced surfactants, accelerants, and inhibitors capable of producing parts that pass the specified test requirements. The rinse waters can go to drain as long as pH requirements set by regulations are met.

#### Features/Benefits

- Biodegradable Chemistry: Occurs naturally in citrus fruits, it is a environmentally and physically safe product. It lower cost as no hazardous waste removal is required.
- Safer Chemistry: Nitric Acid cleaners are extremely reactive and can generate NOx vapours which are dangerous to the operator and harmful to the environment. Spotless™ Citra Pass SS does not produce toxic fumes or by products during operation.
- Maintains Tank Integrity: Stainless Steel is an alloy, or mixture of, iron, nickel and chromium metals that produce strength and corrosion resistance. They are held safely in metal form, but can be leached out when exposed to strong acids. Spotless™ Citra Pass SS removes only iron free radicals from the surface that cause rust; This means no chromium, nickel or other heavy metals are removed during passivation. It leaves a thin protective layer but unlike nitric acid, it will not damage your tank by etching or pitting.
- Conforms to ASTM A967 specification

### **Typical Operating Conditions**

Concentration	8 - 20%	Concentration, temperature and time
Temperature	20 - 70°C	vary depending on soil load. Use the
Time	4 - 20 min	following as a guide:

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Passivation: Clean stainless steel with alkaline cleaner such as Spotless<sup>™</sup> PBW, drain and rinse with HOT water. Typical make up for a new stainless steel tank installation to meet ASTM A967 specification is 6.5 - 10% Spotless™ CitraPass SS with circulation time listed in the chart below based on temperature. Upon completion of Spotless<sup>TM</sup> CitraPass SS one can drain and neutralize. Neutralization can be achieved by a 30 minute solution of 5% sodium hydroxide at (71 to 82<sup>o</sup>C.) followed by a water rinse. In all cases, it is best practice to drain fully and rinse with potable water following Spotless<sup>™</sup> Citra Pass SS neutralization. Spotless<sup>TM</sup> Sanitize is an effective post-rinse sanitizer.

20 minutes $20 - 50^{\circ}C (70 - 120^{\circ}F)$ 10 minutes $50 - 60^{\circ}C (120 - 140^{\circ}F)$ 4 minutes $60 - 70^{\circ}C (140 - 160^{\circ}F)$	<u>Minimum Time</u>	<u>Temperature</u>
4 minutes $00 - 70 C (140 - 100 T)$	20 minutes 10 minutes 4 minutes	20 - 50°C (70 - 120°F) 50 - 60°C (120 - 140°F) 60 - 70°C (140 - 160°F)

Immersion bath to be controlled at pH of 1.8 - 2.2.

The passivated parts shall exhibit a chemically clean surface and shall on visual inspection, show no etching, pitting, or frosting resulting from the passivation procedure.

The data and statements contained in this bulletin are based on testing information and are believed to be accurate and reliable. This bulletin is not a Guarantee or Warranty, express or implied regarding the products use. The product is sold on the condition that the purchaser will do their own tests to determine the suitability of the product in a particular application.

**READ THE MSDS BEFORE USING THIS PRODUCT** 

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