



PRODUCT INFORMATION



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Technical Data:

Description: *CitriSurf 2050* is a high quality blend of chemicals formulated for the cleaning and passivation of stainless steel products. *CitriSurf 2050* is specifically designed to provide low cost and efficient removal of contaminants and all free iron from the surface of austenitic and duplex grades of stainless steel, providing the highest chrome oxide levels possible.

Physical Properties:

Specific Gravity	1.25
Approx. wt. /gallon	10.35 lb/gal
Viscosity	6 cps
Form	Liquid
Chemical Composition	Citric acid, water, proprietary ingredients
Operating Temperature	Room temp or higher (120-160°F preferred)
Flash Point	None
Water solubility	Complete
Normal working concentration	7-13% by volume in water
pH at working concentration	approx. 1.8

Packaging: 5 gallon or 55 gallon plastic containers. Larger sizes available upon request.

Application Procedure: *CitriSurf* is an excellent cleaner by itself for many cleaning and passivation processes. However, to assure best results and help extend the life of the bath, the parts to be passivated may be cleaned with an appropriate cleaning solution prior to treatment with *CitriSurf* solution, especially when heavy grease and oils are present. For grades containing high carbon, sulfur, or selenium, preclean using a good water based alkaline cleaner of pH ≥ 10 (see *KleerKleen 4002*). *CitriSurf 2050* is an emulsifying cleaner.

All equipment, mixers, tanks and pumps should be clean and dry prior to mixing of *CitriSurf* solution. *CitriSurf 2050* should be mixed with clean water (purified water if desired) at a ratio of **1 part of *CitriSurf 2050* with 7 to 14 parts of water by volume** to fill the tank used so as to adequately cover all parts to be treated. Polypropylene, stainless steel, or equivalents should be used for construction of all tanks and devices used in the *CitriSurf* bath. Agitation of the solution in the tank is strongly recommended to attain optimum results. Air bubble agitation may produce excessive foaming (see *CitriSurf 3050*). Optimum results can be obtained with many parts by using *CitriSurf* in an ultrasonic tank.

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Heat the solution for optimum performance. 120-160°F is typical. Room temperature is often adequate with increased immersion time. Teflon coated (or equivalent), stainless steel or titanium heating devices are recommended.

Completely immerse the parts to be passivated in the solution for a period sufficient to remove all free iron and contaminants from the surface. This is typically 5-20 minutes, depending on temperature, grade of stainless steel, hardness, use of ultrasonics, and the condition of the surface of the parts. Your tests should indicate the best combination of bath parameters for the products you manufacture.

Rinse the parts thoroughly with clean water. Flowing water is optimum. Purified water may be used to prevent water spotting. Dry completely in air immediately. Drying can be accelerated by use of a hot air oven or other drying medium to attain a highly passive surface.

Notes on Use: Although very safe in normal use, *CitriSurf 2050* is a Citric Acid based material, and as such it may cause irritation to exposed surfaces of the body. **See Safety Data Sheet before using this material.**

For large items, on-site, or spot treatment applications, ready to use versions *CitriSurf 77* and *CitriSurf 2210* are available.

Maintenance: Replenish the bath with *CitriSurf* and water as appropriate to compensate for dragout, evaporation, and acid consumption. The pH of the *CitriSurf 2050* passivation bath should be held to within +0.1 of its initial value for normal operation. See Maintenance Sheet for further information.

Disposal: Dispose of according to all federal, state and local regulations.

Storage: *CitriSurf 2050* should be stored at temperatures between 50°F and 120°F in 316 stainless steel or approved plastic containers (polyethylene or polypropylene). (If accidentally frozen, thawing will return product to normal.)

Technical Services: For technical assistance, please contact Stellar Solutions at (847) 854-2800.

Standards: When used correctly, *CitriSurf 2050* meets the requirements of the ASTM A967, ASTM A380, ASTM B600, and AMS 2700 standards.

Testing of your products with *CitriSurf* before using in production is recommended. Every product and production facility is different, and requires testing to ensure that *CitriSurf* is compatible with the particular situation. No warranty is implied, or may be given in writing or verbally without the written permission of Stellar Solutions, Inc.

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