STELLAR SOLUTIONS®

PRODUCT INFORMATION

CitriSurf® 3050

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Technical Data:

Description: *CitriSurf 3050* is a high quality blend of chemicals formulated for the cleaning and passivation of stainless steel products where very low foaming is required, i.e. CIP applications and baths with air agitation. *CitriSurf 3050* 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	10.3 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 solution, the parts or system to be passivated may be cleaned with an appropriate cleaning solution prior to treatment with *CitriSurf* solution, especially when heavy grease and oils or residue of other materials 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 3050* is an emulsifying cleaner.

All equipment, mixers, tanks and pumps should be clean and dry prior to mixing of *CitriSurf* solution. *CitriSurf 3050* should be mixed with clean water (purified water if desired) at a ratio of **1 part of *CitriSurf 3050* with 7 to 14 parts of water by volume** to fill the tank used so as to fill the clean in place (CIP) loop or adequately cover all parts to be treated. (A ratio of 1 to 10 is typical for CIP.) Polypropylene, stainless steel, or equivalents should be used for construction of all tanks, pumps, and devices used with the *CitriSurf* solution. For parts, agitation of the solution in the tank is strongly recommended to attain optimum results. Optimum results can be obtained with many parts by using *CitriSurf* in an ultrasonic tank.

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

Flush the solution through the CIP loop or completely immerse the parts to be passivated in the solution for a period sufficient to remove all free iron and contaminants from the surface. CIP operations are typically run for 30-60 minutes. For parts 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 CIP loop or parts thoroughly with clean water. Flowing water is optimum. Purified water may be used to prevent water spotting. Dry completely in air immediately. Drying of parts can be accelerated by use of a hot air oven or other drying medium to attain a highly passive surface.

Notes on Use: Increased foaming maybe observed at cooler temperatures. Heat the solution to minimize foaming.

Although very safe in normal use, *CitriSurf 3050* 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 where continuous spraying is not available, 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 3050* 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 3050* 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 3050* 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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