



GREENSOLV inc.

TECHNICAL BULLETIN

G-CLEAN 247

PASSIVATING AGENT FOR STAINLESS STEELS (CITRIC ACID)

1) PRODUCT DESCRIPTION

G-CLEAN 247 is a very efficient water and citric acid based passivating agent that dissolves free iron ions on all stainless steel surfaces. This product was developed to meet ASTM A 967 – 05 passivating standards. **G-CLEAN 247** is very efficient at cleaning inorganic contaminants such as free iron ions, rust & oxidation on all metals. It is compatible with almost any surface : metals, plastics, concrete, masonry and glass. **G-CLEAN 247** is normally used pure (no dilution) for the passivation of stainless steel parts. It can be used diluted for some specific applications

Typical Applications

Stainless steel passivation
Rust cleaning
Parts cleaning by soaking

Concentration of G-CLEAN 247 in water

pure
pure – 1 :1
1:1 – 1:4

2) ADVANTAGES

Based on an elaborate blend of organic acids, surfactants and corrosion inhibitors, **G-CLEAN 247** has a very low toxicity and advantageously replaces the nitric acid based passivating agents.

Particularities:

- Dissolves the free iron ions
- Highly effective
- Water & citric acid based
- Biodegradable
- 0% VOC (Volatile Organic Components)
- Efficient on all stainless steel types
- Low toxicity





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3) PHYSICAL PROPERTIES

Appearance.....	brown-orange liquid
Odour.....	lemon slight odour
pH (Sol. 1%).....	2.0 – 3.0
Rinseability.....	excellent
Flash point.....	Not flammable
Specific gravity.....	1.05 – 1.15
VOC (Volatile Organic Components).....	0% (0 g/L)
Biodegradability.....	good

4) DIRECTIONS FOR USE

Note: For best results, when using G-CLEAN 247 on heavy contamination, follow these instructions:

- *Mechanical agitation with a brush, a rag or other will greatly improve the cleaning efficiency*
- *Use warm or hot water when rinsing or diluting G-CLEAN 247 if applicable.*

STAINLESS STEEL PASSIVATING

Note : Depending on stainless steel type, contact time and temperature will vary considerably. Consult your representative for a detailed procedure.

- Degrease the surface to be passivated with an alkaline cleaner such as **G-MAX 328** diluted with water at a ratio of 1:2 to 1:4 (20 to 33%);
- Apply **G-CLEAN 247** on the surface to be passivated for 30 to 120 minutes at room temperature (23°C), or according to the recommendations of your representative (the martensitic steels are more sensitive to acid cleaning than the austenitic steels). Make sure that the surface remains sufficiently wet with **G-CLEAN 247** during the whole passivation process.
- Rinse well with water containing less than 200ppm solids – *NOTE : do not use water with high concentration of iron to avoid contaminating the surface once again;*
- After the passivation with **G-CLEAN 247**, neutralize the surface with an alkaline cleaner such as **G-MAX 328** diluted with water at a ratio of 1:2 to 1:4 (20 to 33%); (let work for a minimum of 10 to 15 minutes) – **NOTE: this step is not required when passivating austenitic stainless steel (ex: 304 & 316)**
- Proceed to a passivation test as per ASTM A 967-05 to confirm passivation.

RUST CLEANING

- Apply pure or diluted on the surface to be cleaned (see recommended dilutions)
- Let work for 10 to 20 minutes
- Use mechanical agitation (brush, rag or other) if required
- Rinse with water.



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5) PERSONAL PROTECTION

When using **G-CLEAN 247**, it is recommended to wear the following safety equipments:

- Safety glasses or goggles
- Chemical resistant gloves
- Chemical protecting suit (if used in a shower when passivating big parts)

6) STORAGE

Store **G-CLEAN 247** at a controlled temperature of 0° C to 30° C (50° F to 104° F) in a plastic container. The product could freeze below 0°C (32°F). Store in a closed plastic container when not in use. The shelf life of the product has been determined to be three (3) years.

7) PACKAGING

- Pails (20 Litres/ 5 Gallons)
- Drums (205 Litres / 55 Gallons)

Version : 4

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