



TECHNICAL INFORMATION NOVASEAL 1000LF

1. DESCRIPTION

Novaseal 1000LF is a highly effective, medium temperature, low foam liquid sealing compound for use on a wide variety of aluminium alloys which have been clear or colour anodized. **Novaseal 1000LF** works by penetrating into the void spaces of the anodized surface and through a precipitation mechanism, plus these voids giving the anodized film added corrosion resistance. The 'smutting' or 'powdering' often experienced in sealing anodized aluminium can be greatly reduced and often eliminated by using **Novaseal 1000LF**. The 'yellowing' sometimes experienced as a result of sealing clear anodized coatings formed at higher temperatures in solutions containing organic dispersants, can be completely eliminated by using **Novaseal 1000LF**. Tremendous savings can be realised by sealing in **Novaseal 1000LF** at 80 – 85°C versus hot water at 98 – 100°C, and the quality of the sealed coating is actually enhanced. Being low foam, **Novaseal 1000LF** can be air agitated for better results.

2. OPERATING INSTRUCTIONS

Concentration	-	2.0% to 2.5% by volume
Time	-	6 minutes for 10 micron, 10 minutes for 18 micron film
Temperature	-	80 – 85°C
pH	-	5.5 +/- 0.5
Water	-	Tap water of good quality or deionised water
Agitation	-	Air or mechanical

Note that the range for concentration, time and temperature are quite broad. Experience has shown that conditions which give good results will vary from plant to plant, but generally fall within these ranges. Coating thickness, seal specifications and anodizing conditions effect the operation conditions recommended.

Organic dyes should be sealed using the following parameters.

Concentration	-	1.5 – 2% by volume
Time	-	2 – 4 minutes
Temperature	-	80 – 85°C
pH	-	5.8 – 6.0



3. OPERATING CONDITIONS

- a) Using a stainless steel or other acid resistant tank that can be heated to 90°C and air or mechanically agitated.
- b) When installing **Novaseal 1000LF** in a tank for the first time, make sure that the tank is clean. This may necessitate sand blasting the tank walls and coils to remove water scale deposits or other foreign matter.
- c) To ensure full benefits from **Novaseal 1000LF**, it is imperative that the water pH be in the 5.5 to 6.0 range before adding the **Novaseal 1000LF**. Acetic acid should be used to lower the pH of the **Novaseal 1000LF** solution and diluted ammonium hydroxide used to raise the pH.
- d) Rinse thoroughly after anodizing. Use good quality water and overflow at adequate rate to maintain low ion concentrations (two rinses recommended).
- e) Use good quality water or deionised water for **Novaseal 1000LF** bath.
- f) Maintain **Novaseal 1000LF** concentration by making daily additions.
- g) Maintain the pH of the **Novaseal 1000LF** bath at 5.8 – 5.9.
- h) Rinse thoroughly after sealing **Novaseal 1000LF** using good quality water or deionised water. Heat the final rinse to 60 – 65°C. Keep pH below 6.0. This is required only when the **Novaseal 1000LF** tank is dirty and leaves powdery residue on metal.
- i) Use mild air agitation in the final rinse.

4. FILTERING INFORMATION

Novaseal 1000LF is filtered and used as a perpetual bath. A suitable filter capable of at least three bath turnovers per shift should be used. Use 1 – 5 micron filter cartridges or bags. Do not filter the solution above pH 6.5.



5. CONCENTRATION CONTROL

- a) Take 100 mL of **Novaseal 1000LF** solution that has cooled to room temperature.
- b) Add approximately 200 mL of distilled water.
- c) Add 25 mL of concentrated ammonium hydroxide and 10 mL of triethanolamine.
- d) Add approximately 0.1 gram of murexide indicator.
- e) While mixing, titrate with 0.1M E.D.T.A. until a purple violet colour is obtained.
Record the number of mL of 0.1M E.D.T.A. required.
- f) Calculation:

% by volume of **Novaseal 1000LF** = (mL of 0.1M E.D.T.A. required) x 0.14.

6. PHYSICAL AND SAFETY DATA

Novaseal 1000LF is a dark green, clear to hazy liquid.

Novaseal 1000LF is not a hazardous chemical.

Specific Gravity: 1.09

7. PACKAGING

Novaseal 1000LF is packed in 1000 Litre containers.

DISCLAIMER

Any information given is, to the best of our knowledge, the best currently available, with respect to our products and their use, but it is subject to revision as additional knowledge and experience is gained. Such information is offered as a guideline for experimentation only and is not to be construed as a representation that the material is suitable for any particular purpose or use. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use. This information is not a license to operate under nor is it intended to suggest infringement of any patent. We guarantee a uniform quality standard for this product. The only conditions and warranties accepted by Henkel in relation to this product or process are those implied by either Commonwealth or State statutes.