Gardolene® D 6871

Reactive non-chrome final seal for use with iron and zinc phosphates. Can provide the performance of chrome seals without the use of chrome.

PRIMARY APPLICATION

Gardolene® D 6871 is a non-chrome final seal for phosphate conversion coating processes. It is applicable on steel, aluminum, zinc and their alloys. Gardolene D 6871 reacts with the phosphated metal surfaces to enhance paint adhesion and corrosion resistance properties. It can impart some in-plant temporary rust protection. It is approved to Caterpillar 1E4093.

APPLICATION PROCEDURE

All surfaces should be cleaned and treated with an appropriate conversion coating.

Application must be preceded by a fresh water rinse stage, which should include a final fresh water riser, with the overflow directed toward the preceding rinse stage.

Gardolene D 6871 is used in the final rinse stage of an immersion or spray phosphating process under the following conditions:

- concentration: 1.0 - 1.5 % by volume
- points: 3.4 - 5.2 ml
- temperature: 70 - 110°F (21 - 43°C)
- time: 15 seconds minimum
- pressure: 10 - 15 psi (0.7 - 1.0 bar)
- conductivity (TDS): 900 μS/cm (600 ppm TDS) maximum

For best performance, do not use a final water rinse after Gardolene D 6871. Oven drying is recommended. Forced air is recommended to remove excess solution from pockets or cavities.

SOLUTION CONTROL

Test Kit OKT9710-170

Gardolene D 6871 is controlled with the following procedure (Gardotest Procedure 170):

1. Place a 100 ml bath sample into a 250 ml Erlenmeyer flask.
2. Add 5 - 10 drops of Gardotest Indicator 197 (Neutral Red Indicator). The color will be yellow.
3. Titrate with Gardotest Solution 45 (0.1 N Acid) until the solution turns from yellow, through pale orange to pale red.
4. Record the milliliters of Gardotest Solution 45 used. This is the points.
5. If desired, the points can be converted to percent by volume by multiplying by 0.29.
NOTES ON USE

A fresh Gardolene D 6871 solution should be charged when the conductivity exceeds 900 μS/cm or the TDS exceeds 600 ppm.

A Gardolene D 6871 solution will normally have a pH of about 8 - 10. The pH will normally decrease somewhat as the solution ages. It is not necessary to monitor or adjust the solution pH.

For best performance, water for bath initial charge and replenishment should not exceed the following limits:

- Conductivity (TDS) ................. 550 μS/cm (375 ppm)
- Chloride plus Sulfate .............. 70 ppm

Tanks may be constructed of carbon steel, stainless steel or other appropriate chemically-resistant material. Heating surfaces should be constructed of stainless steel or other appropriate chemically-resistant material.

EQUIPMENT

The Chemetall Chemical Metering Pump can be used to automatically maintain the make up chemical requirement of this product. Please contact the Chemetall Process Equipment and Engineering Department for specific recommendations.

SAFETY AND HANDLING

Prior to handling and use of any of the materials referenced in this document, the Material Safety Data Sheets should be read and understood by all personnel in contact with these materials.

KEEP OUT OF REACH OF CHILDREN

STORAGE

Dry indoor storage at temperatures between 40°F and 100°F (4.4°C and 37.8°C) is recommended, away from any incompatible materials referenced in the Material Safety Data Sheets. All containers should be tightly closed when not in use.

DISPOSAL

Any disposal of the materials referenced in this document should be in accordance with all applicable federal, state, and local regulations. The process solution can contain components other than those present in the materials as supplied. Analysis of process solutions may be required prior to disposal.