

TECHNICAL DATA SHEET

CORROGUARD 3039 PF

SILICATE FREE, WATER BASED TOP COAT FOR BLACK PASSIVATED ZINC & ZINC ALLOYS

Corrouguard 3039 PF is a unique post passivation top coat, especially designed to be applied on black chromated zinc & zinc alloys deposits. The new generation process is free from silicates &/or silanes & hence, it would not affect the basic colour intensity of the black chromates. Further, the top sealing process would improve the colour smoothness & also, corrosion & scratch resistance of the black chromate coating.

Features:

- New generation trivalent chrome based top sealing process for black chromates.
- Improves the appearance of the black chromates.
- Significantly enhances the corrosion protection & also, the scratch resistance of the applied substances.
- Free from silicate &/or silanes & hence, it would not affect the basic colour intensity of the black chromates.
- Does not affect the conductivity of the coated components ~ can be applied on components which are desired for electrical appliance.

Solution Make Up:

Corrouguard 3039 PF	:	Rack	: 50 - 100 ml/l
		Barrel	: 150 - 200 ml/l
*Temperature	:		40 - 55°C
**pH	:		4.2 - 4.8
Immersion Time	:		10 - 30 Sec.
Drying Condition	:		5 – 15 min. at 80 – 90°C component temperature.

*: Preferably, use hot water bath or jacketed heater (indirect heating). Avoid usage of direct heating by putting immersion SS heater which could indulge precipitation.

**.: For pH maintenance add 10% caustic soda solution.

Process Sequence

Zinc Plating → Drag Out → Cascade Rinse → Activation in 0.5% Nitric or Hydrochloric Solution Acid → Rinse → Black Trivalent Chromate Coating → Cascade Rinse → Rinse → Corroguard 3039 PF → Dry

Product Description:

- **Corroguard 3039 PF:** Unique new generation trivalent chromium containing top sealing agent for black chromates. While applying on black chromates it forms a second layer of passivation film with the help of an inorganic fixing agent & thereby, it improves corrosion & scratch resistance including the appearance of the deposit.

Maintenance:

Corroguard 3039 PF operating solution should be analysed periodically (refer "Analysis Procedure") and accordingly, replenish the quantities to ensure smooth and consistent performance.

As per usual guideline addition of Corroguard 3039 PF 1–2 ml/sq.ft would meet the process requirement.

Analytical Procedure:

The analysis process is given below:-

1. Pipette out 2 ml of the operating solution in a 250 ml of Erlenmeyer flask and add 100 ml of DM water.
2. Add 20 ml of 10% aqueous caustic soda solution. Colour changes can be observed.
3. Add 5 ml of Hydrogen peroxide (30%) & cover it with a watch glass and allow to react the reactants for 5 min. without stirring. Again add 5 ml of Hydrogen Peroxide & stir for another 5 min. Boil the solution until the total solution reaches approximately 50% of its volume. At this point it is very much important to remove the trace of peroxide from the solution.

Note: It is very much essential to boil of completely the residual peroxide ~ may be the mixture should be boiled continuously and stop heating just before crystallization.

4. Cool down to room temp. and add 10 ml of 50% (v/v) Hydrochloric acid ~ colour changes from yellow to orange.
5. Add 1 gm of potassium iodide, colour changes to reddish brown.
6. Titrate with 0.1 N sodium thiosulphate solution till straw yellow colour and then add starch indicator and continue titration to green end point. Note down the titre value.

Calculation: Conc. of Corroguard 3039 PF in ml/ltr. = Reading x Normality x 17.36

DISCLAIMER :

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