

IridescentYellow-Green Passivation EB-400

Chrome conversion coating of zinc and cadmium

Passivation EB-400 produce iridescent yellow-green colored chromate coating on zinc and cadmium plating surfaces. The chromate coating affords high corrosion resistance and meets federal specifications.

Make-Up Method:

Fill the tank 2/3rd with water. Add 30ml/litter EB-400 and 2ml of Nitric acid (optional)to final level by adding water.

Surface Preparations:

A uniform plated surface is required. Sufficient water rinsing is recommended before chromate to prolong the use of the chromating solution and produce uniform coatings. Rinse freshly plated surfaces and immerse in a 0.3-0.5% nitric acid solution and then rinse in water. The acid dip neutralizes any alkali remaining on the work plating and prolongs the use of the solution.

Operating Conditions:

Concentration	:	20-40 ml (Optimum 30ml/litter) (Lower concentration for green and higher concentration for rainbow/golden shades)
Temperature	:	Ambien temperature
Time	:	10-30 second
PH	:	1.2-1.8
Curing temperature	:	50-60°C

Operations:

Immerse the plated parts in EB-400 solution. Agitate parts for a few seconds to thoroughly wet the entire surface. Immersion will depends on several factors including temperature, concentration, and extent of use of the solution, activity of the metal surface and the desired coating characteristics. Visual observations by the operator serve as the most reliable guide to immersion time treatment, rinse the parts thoroughly in running cold water. Two rinses are recommended.

Drying:

The method of drying is fairly critical. The chromate coating is soft when freshly applied and should not be abraded. Drying is best done by cold air centrifugal dryer. Coating dried in this manner will be slightly soft but will age harden to maximum hardness, but use of these drying methods may reduce the corrosion resistance of the coating.

Concentration:

High concentration of EB-400 will result in more chemical polishing (brightening) thinner coating, more basis metal removal. Lower concentration of EB-400 will result in less brightening heavier coatings, more intense in the coating and less basis metal removal.

Testing Method:-

- Transfer 10 ml sample into 500 ml Erlenmeyer flask.
- Add 250 ml distilled water and 10 ml of 10% KI.
- Add 10 ml 50% Sulphuric acid.
- Titrate with 0.1 N Sodium thiosulfate to within 1-2 cc of the end point. Add 1 ml of hot starch solution can
- Continue titrating from a deep blue to colorless end point.

Calculation:

Yellow-Green Passivation EB-400 (ml/ liter) = ml of Sodium thiosulfate X Normality X 8

Determination Of Nitric Acid:

Transfer 1 ml sample into 500 ml Erlenmeyer flask. Add 5 droops of phenolphthalein. Titrate with 0.1 N Sodium hydroxide to a first definite pink which holds for several Seconds.

Calculation:

ml Sodium Hydroxide X Normality X 0.3 = litter of 36 °Be Nitric acid per 100 liters of solution.

Waste Treatment:

Yellow-Green passivation EB-400 solutions contains chromic acid (hexavalent). It should be neutralized with ferrous sulfate to trivalent stage and upon reduction should be neutralized with alkali before discarding into sewerage line.