

TRICHROME HB 1700 T

Trichrome HB 1700 T is a new generation eco-friendly product based on trivalent chrome which provides a high corrosion resistant blue passivation coating for Zinc and Zinc alloys. Outstanding features of the product are as follows :

- The **corrosion resistance of Zinc** plated components passivated with Trichrome HB 1700 T far exceeds the specified limit in ASTM B117 for blue passivation, ranging from **75 hrs - 125 hrs** neutral salt spray.
- The chromating solution and chromate film are entirely **free from hexavalent chromium**, other toxic and carcinogenic ingredients~easily conforms ROHS, ELV & WEEE norms.
- Stress relief baking after chromating does not adversely affect the corrosion resistance.
- Chromating is done with conventional equipments and methods.

OPERATING CONDITIONS :

Parameters	Units	Range	Optimum
Concentration	ml/l	50 - 120	70
pH	-	1.7 - 2.2	1.8
Temperature	°C	25-40	30
Dipping Time	sec	15-60	30

N.B.: The performance of the process is highly dependent on the working pH. pH should be measured by using properly calibrated pH meter at the specified working temperature. In case pH of the solution is not within the specified range, adjust pH. Generally Nitric Acid @ 0.5 - 1.0 ml/l is required for reducing the pH. However, for raising pH 10% Caustic Soda solution may be used. In some cases addition of 10% sodium carbonate is helpful for increasing the pH of the working bath.

POST TREATMENT :

After passivation and thorough washing, the components must be dried at 80-100°C for 5-10 minutes using either centrifugal drier or hot air oven to achieve the desired result.

MAKE UP PROCEDURE :

1. Fill the passivate tank three quarter full with soft water.
2. Add required quantity of Trichrome HB 1700 T while stirring.
3. Fill the tank to the operating level with water.
4. Check the pH and adjust using Nitric Acid / Caustic Soda Solution

PROCESS SEQUENCE :



CONTROL :

Maintenance of the process may be accomplished through regular addition of Trichrome HB 1700 T. In some barrel plating operation the type of zinc bath used and the quality of rinsing may require more frequent addition of Nitric Acid.

CONSUMPTION :

As a guideline the consumption of Trichrome HB 1700 T would be 15-30 ml/Sq. m, which may vary depending upon drag-out loss, geometry of components, handling etc.



TROUBLE SHOOTING :

Fault	Reason	Remedy
Hazy Deposit	pH out of range Agitation of part is too intense Air agitation is too strong	Adjustment of pH to 1.7 – 2.2 Reduce agitation Reduce air agitation
Colour tone too yellow	pH-value too high	Adjust pH-value to 1.7 – 2.2 with nitric acid.
Dark spots within low current density range	Co-deposition of foreign metals in zinc coating	Purification of zinc bath
Spots on acid zinc-plated articles	Passive zinc coating	Activate zinc coating properly in diluted nitric acid prior to passivation
Expected corrosion protection not achieved	Fe content > 400 ppm Cu > 5 ppm Pb > 5 ppm Zn > 20 gm/lit	High pH treatment Stop copper source Stop lead source. Prepare new make-up. Discard solution partly. Use of ion exchanger recommended

CAUTION :

The product may cause burn to skin and eyes and may also damage the respiratory system. Wear protective clothing, safety goggles and face mask when handling the material. In case of contact, flush the exposed areas with clean, cold water. In case of injury, consult a physician.

WASTE DISPOSAL :

TRICHROME HB 1700 T process contains trivalent chromium which must be treated as other heavy metals in the effluent streams. Rinse water containing dilute process solution resulting from drag-out, process spills and concentrated bath discharges may be blended with other heavy metal waste streams and treated using conventional heavy metal precipitation techniques and de-watering procedure prior to discharge. For more details refer MSDS.



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