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COLDIP NI-Z TRI BLUE 100

LIQUID CHROMATE
TECHNICAL DATA
12-06-11

COLDIP NI-Z TRI BLUE 100
A HIGH CORROSION RESISTANT "TRIVALENT BLUE-BRIGHT" CONVERSION COATING FOR ZINC

COLDIP NI-Z TRI BLUE 100	is a unique all Trivalent passivating conversion coating for electroplated zinc/nickel alloy.
COLDIP NI-Z TRI BLUE 100	will impart an aesthetically pleasing blue-bright conversion coating which when applied properly will produce a finish that exceeds 250 hours of neutral salt spray to white corrosion products.
COLDIP NI-Z TRI BLUE 100	is a cost effective alternative to high corrosion finishes in an all "trivalent" containing product.
COLDIP NI-Z TRI BLUE 100	is an easy to use one part system that is applied by conventional immersion techniques.
COLDIP NI-Z TRI BLUE 100	when top coated with Zinc-Chro-SHIELD will provide 500 hours to white corrosion products.

OPERATING INSTRUCTIONS

SOLUTION MAKE-UP:

CONCENTRATION:	3% to 8% by volume (Optimum 5%)
DIP TIME:	30 to 90 seconds
TEMPERATURE:	130° to 150° F (55° - 65° C)
pH:	3.0 to 4.5 (Optimum 3.5)

NOTE: Dip times can vary depending upon the concentration and the age of the chromate. If needed, diluted caustic soda can be used to raise pH.

MAINTENANCE ADDITIONS

Periodic titrations should be made to ensure correct concentration. If the analysis shows the proper amount of COLDIP NI-Z TRI BLUE 100 and the pH is high, small additions of 50% by volume of nitric acid can be made to adjust the pH.

ANALYTICAL PROCEDURE

1. Pipette a 10 ml chromate sample into a 100 ml volumetric flask. Dilute to 100 ml with distilled water and mix well.
2. Pipette 10 ml of the above diluted solution into a 250 ml Erlenmeyer flask and dilute to 100 ml with distilled water.
3. Add 5 ml 20% Sodium Hydroxide and 1 ml 35% Hydrogen Peroxide.
4. Boil solution approximately 5 minutes.
5. Slowly add 1 ml 10% Nickel Chloride Solution and continue boiling for an additional 2 minutes.
6. Cool solution to room temperature.
7. With mixing, add 10 ml Concentrated Hydrochloric Acid, 1 g Ammonium Bifluoride, 10 ml 10% Potassium Iodide and 2 ml Starch Indicator Solution.
8. Titrate with Standard 0.010 N Sodium Thiosulfate from a blue to clear-green endpoint.

FACTOR: ml 0.010 N Sodium Thiosulfate x 0.382 = % COLDIP NI-Z TRI BLUE 100

TYPICAL CYCLE:

- PLATE
- RINSE
- RINSE
- COLDIP NI-Z TRI BLUE 100
- COLD WATER RINSE
- HOT WATER RINSE
- DRY

HELPFUL HINTS

1. A Hydrochloric Acid pre-dip is recommended to increase the life of the chromate particularly when an alkaline zinc electrolyte is utilized.

2. With trivalent chromate based conversion coatings, care should be taken to avoid excess abrasion of the parts after finishing in that trivalent coatings when fractured do not “heal” as in the case of traditional hexavalent products.

3. Although the pH for a new solution make-up may be below the recommended operating range of 1.5 to 3.0, parts can be processed since the pH will climb after only a few hours.

HANDLING AND STORAGE

CAUTION: COLDIP NI-Z TRI BLUE 100 is corrosive and contains chromium compounds and strong mineral acids. Contact with the skin or eyes should be carefully avoided. Protective clothing and eye shields or goggles should be worn when handling COLDIP NI-Z TRI BLUE 100.

In case of contact, flush with large amounts of water. Remove contaminated clothing. For more detailed handling and storage instructions, please refer to the MSDS.

FREEZABILITY: As with most chemical products, it is preferable that freezing be avoided. However if freezing should occur during transportation or storage, directions for handling the products covered in this technical data sheet are as follows:

If COLDIP NI-Z TRI BLUE 100 freezes, warm to 95-105F/35-41C in a warm water bath. Thoroughly mix until precipitates are completely dissolved.

NON-WARRANTY

The data contained in this bulletin is believed by Columbia Chemical Corp. to be accurate, true, and complete. Since, however, final methods of use of this product are in the hands of the customer and beyond our control, we cannot guarantee that the customer will obtain the results described in this bulletin, nor can we assume responsibility of the use of this product by the customer in any process which may infringe the patents of third parties.