



ZINCOVATE ZNI CLEAR

INTRODUCTION

Zincovate ZNI Clear is a trivalent chromium passivate for zinc/nickel alloy deposits. This product gives a clear/grey finish with excellent corrosion resistance.

BENEFITS

- Trivalent chrome.
- Grey/Clear appearance
- Applicable to rack and barrel.

SOLUTION MAKE -UP

Zincovate ZNI Clear 75ml/L

OPERATING DATA

Concentration	60 – 85ml/L
Temperature	25 - 35°C
pH	3.2 – 3.7
Time	20 – 50 sec
Agitation	Work movement/air
Extraction	Recommended

EQUIPMENT

Tanks	Polypropylene or polyethylene
Heaters	PTFE coated with thermostatic control.

INSTALLATION

It is essential that the tanks to be used for Zincovate ZNI Clear are thoroughly cleaned and leached before any product is introduced.

If in any doubt as to the cleaning procedure please contact PMD Technical Department.

1. Fill the bath tank 2/3 with water
2. Add the quantity of Zincovate ZNI Clear
3. Top up to the final volume with water.
4. Check the pH and correct it with nitric acid to the value of 3.2 – 3.7.
5. Heat to operating temperature.



MAINTENANCE AND CONTROL

The solution should be analysed regularly and replenished as necessary. (See analysis method).

Replenishment can be based on throughput. A total consumption, including drag out has been calculated for 100 m² of treated surface of as 2.5 – 3.0 L. of Zincovate ZNI Clear (d= 1.22 g/cc).

pH corrections must be made with nitric acid to lower or 32% sodium hydroxide to raise.

The maximum contaminants are: Zinc 10 - 15 g/L
 Iron 100 - 150 mg/L (ppm)

Excess iron causes the appearance of yellow spots.

ANALYSIS METHOD

Reagents

Sodium hydroxide (10% w/v)
Hydrogen peroxide (100 Vol)
Hydrochloric acid (S.G = 1.18)
Ammonium bifluoride
Potassium iodide
0.1N sodium thiosulphate (Standard volumetric solution)
Iodine indicator.

Method

1. Pipette a 5ml aliquot into a 500ml conical flask.
2. Add 100ml of DI water.
3. Add 10ml of 10% sodium hydroxide.
4. Add 20ml hydrogen peroxide slowly with stirring.
5. Boil the solution for 30 minutes.
6. Allow the solution to cool and wash down the sides of flask with DI water.
7. Add 10ml hydrochloric acid.
8. Add 5gm ammonium bifluoride and stir to dissolve.
9. Add one spatula of potassium iodide and stir to dissolve.
10. Titrate with 0.1N sodium thiosulphate to a pale straw colour.
11. Add iodine indicator and continue titration to a light green colour.
12. Record the titre = t mls.

Calculation

$t \times 5.85 = \text{ml/L Zincovate ZNI Clear.}$

DISPOSAL

Dispose of in accordance with local authority requirements.

PRODUCT FAMILIES

The following products are referred to in this data sheet.

PRODUCT NAME	PRODUCT NUMBER
Zincovate ZNI Clear	237096

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