

# ZINCOPASS 6 YELLOW

HEXAVALENT YELLOW CHROMATE

## INTRODUCTION

Zincopass 6 Yellow is a single stage dip process designed to produce a full yellow chromate finish on zinc plate. It is also suitable for cadmium plate. The process is economical and simple to operate giving high quality results.

## BENEFITS

- Inhibits tarnishing
- Provides good corrosion protection
- Easy to control
- Works on cadmium

## SOLUTION MAKE-UP

Zincopass 6 Yellow                      0.2 – 2.0% v/v

## OPERATING DATA

Concentration	0.2 – 2.0% v/v (See Notes)
Temperature	68 – 86°F
pH	1.4 – 2.5 (on zinc); 1.1 – 2.5 (on cadmium)
Immersion time	10 – 45 seconds
Agitation	Work movement preferred

Manufactured for North America exclusively by **FOCUSTECH™**



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# EQUIPMENT

<b>Tanks</b>	Stainless steel, polypropylene or polyethylene
<b>Ventilation</b>	Required

# INSTALLATION

It is essential that the tanks to be used for Zincopass 6 Yellow are thoroughly cleaned and leached before any product is introduced.

If there is any doubt as to the cleaning procedure please contact Automated Chemical Solutions.

1. Fill tank half full tank with water.
2. Add required quantity of Zincopass 6 Yellow.
3. Top up to working level and mix well.
4. The solution is now ready for use.

# PROCESS SEQUENCE

1. Zinc plate
2. Cold water rinse
3. Cold water rinse
4. 0.5% nitric acid dip
5. Rinse
6. Zincopass 6 Yellow
7. Cold water rinse
8. Hot water rinse
9. Dry

# NOTES

## Zinc Thickness

It is important that a minimum thickness of 0.2 mils zinc plate is present before passivation.

## Zincopass 6 Yellow Conc.

For acid zinc plate concentrations of 0.2-0.3% are recommended. For alkaline zinc plate higher concentrations may be used depending on system employed. 1% for cadmium deposits.

## Immersion Time

Immersion time should be optimized for the required color. Longer times will give deeper yellow colors.

# MAINTENANCE AND CONTROL

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To maintain the recommended operating range small frequent additions of Zincopass 6 Yellow should be made. When additions fail to be effective the solution should be discarded and a new passivate made up.

The product will lower the pH. To raise the pH, add sodium hydroxide (100 g/L).

Any components that fall into the passivate solution should be removed immediately. If components are left in solution the bath life will be greatly reduced.

## ANALYSIS METHOD

### Reagents

1. Concentrated hydrochloric acid
2. 10% w/v potassium iodide solution
3. 0.1N sodium thiosulfate
4. Starch indicator solution

### Method

1. Pipette a 10 ml sample of the solution into a 250 ml Erlenmeyer flask.
2. Add 50 mls DI water.
3. Add 15 mls conc. hydrochloric acid.
4. Add 15 mls 10% potassium iodide solution.
5. Allow to stand for 5 minutes.
6. Titrate with 0.1N sodium thiosulfate until dark brown color fades.
7. Add a few drops of starch indicator and continue titration to a clear green end point.

### Calculation

Zincopass 6 Yellow (%) = mls of 0.1N sodium thiosulfate X 0.074

### Replenishment

For every 0.1% required add 1 ml/L Zincopass 6 Yellow

## STORAGE

Store in original containers above 40°F

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# SAFETY

CAUTION! Zincopass 6 Yellow concentrate and working solutions contain acidic and Chrome components. Avoid contact with eyes, skin and clothing. Wear chemical handler's gloves, goggles and protective clothing when handling. Read and understand Material Safety Data Sheet before using this product.

# PRODUCT GROUPS

The following products are referred to in this data sheet.

PRODUCT NAME	PRODUCT NUMBER
Zincopass 6 Yellow	237015

# NOTICE

The information and recommendations of PMD (UK), Ltd. and Automated Chemical Solutions, Inc., and its representatives, regarding this product are, to the best of our knowledge, true and accurate. We make no guarantee of results because the conditions of actual use are beyond our control. We assume no liability for damages or penalties resulting from the use of this product or following our recommendations. Our recommendations and suggestions for use of this product are not intended to grant license to operate under or infringe any patent.

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