



PT. GOLDEN ASIA KEMIKAL

## TECHNICAL DATA SHEET

# GOAL 385

## (ALKALINE NON CYANIDE ZINC)

### INTRODUCTION

**GOAL 385** process is a non-cyanide plating system for rack and barrel plating. **GOAL 385** produces uniform bright and fine-grained deposits with excellent uniform thickness distributions over the total current density and temperature ranges up to 35°C. Since iron poses no problem in the solution, all equipment from regular cyanide zinc plating can be used for the process. Zinc plated parts can easily be chromated and passivated. Zinc deposits achieved in **GOAL 385** process are extremely ductile, this process has special applications for parts which must be later on bent, formed, or welded.

### PRODUCT FEATURES :

- o *Ultra bright and ductility zinc deposition*
- o *Excellent throwing and covering power*
- o *Good adhesion and very low stress deposit*
- o *It accepts all hexavalent and trivalent chromates*
- o *Low operating cost and simplified waste treatment*
- o *Suitable for either rack or barrel plating*

### OPERATING INSTRUCTIONS

	RANGE	RACK	BARREL
Zinc Oxide	10 - 15 g/lt	12 g/lt	14 g/lt
Sodium Hydroxide	110 - 150 g/lt	120 g/lt	140 g/lt
<b>GOAL 385A</b>	8 - 12 cc/lt	10 cc/lt	10 cc/lt
<b>GOAL CONDISIONER</b>	10 - 20 cc/lt	10 cc/lt	10 cc/lt
<b>GOAL 385B</b>	1 cc/lt	1 cc/lt	1 cc/lt

### OPERATING CONDITIONS or SOLUTION PARAMETERS:

Zinc Metal	8 - 12 g/lt
Sodium Hydroxide	110 - 150 g/lt
Cathode Current	0.5 A - 6 A / dm <sup>2</sup>
Optimum For Rack :	2 Amp/dm <sup>2</sup>
Optimum For Barrel :	1 Amp/dm <sup>2</sup>
Voltage For Rack :	5V ( 3 - 6 V)
For Barrel :	11V (10 - 12 V)
Temperature	25°C - 35°C



### **MAINTENANCE**

We recommend to make frequent, small additions of all additives to insure constantly good results. If brightness of the work falls off rapidly, it is recommended to make a chemical analysis of the plating solution and bring the bath back to normal conditions, before making any large additions of additives. The additives cannot compensate improperly balanced plating solutions.

**GOAL 385A** 80 cc – 150 cc/KAh

**GOAL CONDITIONER** 100 - 150 cc/kg NaOH, For every 1 KG of NaOH, add 100 cc of **GOAL CONDITIONER** or if hard water is used, add up to 150 cc.

**GOAL 385B** 50 cc – 70 cc/ KAh

**GOAL 385A** acts as the BASE BRIGHTENER, which control metal distribution and prevents burning at High Current Densities.

**GOAL 385A** reduces internal stress. When it is toolow in the solution, it will result in poor thickness distribution and cause burning in High Current Densities.

**GOAL 385B** acts as BOOSTER BRIGHTENER, which gives extra brightness if required in the product. Too high concentration of **GOAL 385B** can cause streaking.

**GOAL CONDITIONER** is a PURIFIER and CONDITIONER combined, it softens hard water and reduces metallic contamination from raw untreated water.

### **GENERAL INFORMATION**

If the metal content of the solution falls below the recommended level, anodes must be added and should remain in the tank overnight. If the metal content rises, anode area should be reduced. In extreme cases anodes should be replaced with inert anodes, such as iron, until zinc content has fallen within the recommended range. In each case, Caustic Soda content should be adjusted to the metal content using the correct caustic to metal ratio.

### **IMPORTANT**

The separate additions of the additives should never be more than the initial addition. The required amounts should be evaluated in a Hull Cell in advance.