

# PMD (UK) LTD PROCESS DATA

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## CIRGOLD STRIKE

### INTRODUCTION

Cirgold Strike is an acidic gold strike process which is completely compatible with the Cirgold N(HT), N95 and C90 plating processes allowing parts to be transferred directly from one to the other. The action of the solution is a cathodic cleaner which removes any trace of oxide on the surface of the metal after cleaning and leaves a very thin layer of gold which prevents re-passivation of the substrate. Adhesion of the main gold plating is thus enhanced. Additionally, metallic contamination which slowly and inevitably accumulates in a gold bath is restricted to the strike solution resulting in lower maintenance costs and a stable deposit quality from the main gold plating process.

### BENEFITS

Ensures a good adhesion of main gold plating

Reduces contamination of main gold baths.

### SOLUTION MAKE-UP

Cirgold Strike	100% v/v
Gold Potassium Cyanide	2.94g/L

### OPERATING DATA

Gold	1-3g/L
Specific Gravity	1.050 minimum
Temperature	30 - 35 deg C
pH	4.0 - 4.3
Cathode Current Density	0.2 - 1.5 A/dm <sup>2</sup>
Agitation	Solution and/or work movement
Process Time	20 - 30 second

### EQUIPMENT

Tanks	Moulded polythene or welded PVC
Anodes	Platinised titanium
Agitation	Solution movement and/or work movement.

**CGS-09/02  
ISSUE 7**

Filtration

Glandless all plastic construction capable of at least 3 - 4 turn-overs/hour through a 5 micron polypropylene cartridge guaranteed free of winding lubricant.

**INSTALLATION**

It is essential that the tanks to be used for Cirgold Strike are thoroughly cleaned leached before any product is introduced.

If any doubt to the cleaning procedure please contact PMD (UK) Limited Technical Department.

1. Add Cirgold Strike base solution to the cleaned tank.
2. Dissolve the required amount of gold potassium cyanide in hot deionised water.
3. Add the dissolved gold potassium cyanide solution to the tank and stir thoroughly.
4. Heat to operating temperature.

**PROCESS SEQUENCE**

A typical process sequence to plating of brass components is as follows:

1. Soak clean
2. Cathodic clean
3. Rinse x2
4. Acid dip/ Dry acid salts
5. Rinse x2
6. Copper plate (cyanide)
7. Drag out rinse
8. Rinse x2
9. Acid dip/ Dry acid salts
10. Nickel plate
11. Rinse x2
12. Acid dip
13. Rinse
14. Cirgold Strike
15. Gold plate
16. Drag out rinse
17. Rinse x2

## **MAINTENANCE AND CONTROL**

The solution should be regularly analysed for gold and maintained within the operating limits of 1-3g/L gold.

The gold concentration will be approximately maintained by the following addition every 1 ampere hour:

1 gm of gold as gold potassium cyanide  
1ml of Cirgold Strike Replenisher

These materials are supplied in units of Cirgold Strike replenishment. Each unit consists of 100gm gold as gold potassium cyanide and a Cirgold Strike 100ml 'R' unit.

The specific gravity should be maintained at 1.050 minimum by additions of Cirgold Strike Conductivity Salts.

Solution pH will rise gradually with use and should be reduced by adding Cirgold N (HT) Acid Adjuster.

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## **DISPOSAL**

Dispose of in accordance with local authority requirements.

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## **PRODUCT FAMILIES**

The following products or product families are referred to in this data sheet:

<u>Product Name</u>	<u>Product Number</u>
Cirgold Strike Base Solution	037027
Cirgold Strike Conductivity Salts	063006
Cirgold Strike 100ml 'R' unit	047056
Gold as GPC - 100 gram unit	029003
Cirgold N(HT) Acid Adjuster	067003
Cirgold N(HT) Base Solution	037006
Cirgold N95 Base Solution	037044
Cirgold C90 Base Solution	037004

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