

# PMD EQUAURA

## IMMERSION GOLD

### INTRODUCTION

The Equaura Immersion Gold plating process has been formulated to produce an immersion deposit of gold onto many metals.

The simplicity and economy of operation results in the process finding wide acceptance for both technical and decorative applications where it is used on printed circuits, general electronic components, as well as metal fittings, metallised plastics and jewellery.

### BENEFITS

Deposits on a wide range of metals.

Ease of use.

### SOLUTION MAKE-UP

|                                 |         |
|---------------------------------|---------|
| Equaura Immersion Gilding Salts | 1 pack  |
| DI Water                        | 4.5 lts |

### OPERATING DATA

|                    |   |
|--------------------|---|
| Gold               | 3.1g/L.   |
| Temperature        | 85 - 95°C.  |
| pH                 | 6.2 - 8   |
| Agitation          | Work movement   |
| Rate of Deposition | This factor depends entirely on the base metal, however, as a guide the following information will be useful:-<br>On copper: Approx 0.1µ in 5 mins.<br>On nickel: Approx. 0.1µ in 3 mins. |



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|                      |   |
|----------------------|---|
| Suitable Base Metals | Copper and copper alloys.<br>Nickel and nickel alloys.<br>Brass.<br><br>Nilo K. |
| Immersion Time       | 30 secs. - 10 mins. (dependent on base metal and thickness required).           |

**EQUIPMENT**

|           |  |
|-----------|--|
| Tanks     | Stainless steel or polypropylene lined mild steel. |
| Heating   | Stainless steel or PTFE immersion heaters.         |
| Agitation | Work movement.                                     |

**INSTALLATION**

It is essential that the tanks to be used for the Equaura Immersion gilding process are thoroughly cleaned and leached before any product is introduced. If in any doubt as to the cleaning procedure please contact PMD (UK) Ltd Technical Department.

1. Fill the tank with the required volume of DI water.
2. Heat to 40-50°C.
3. Add the Equaura Immersion Gilding Salts and stir until all salts are dissolved.
4. Add Slowing Down Salts if required (see notes).
5. Heat to boiling point and continue boiling for 5 minutes.
6. Allow to cool to operating temperature.

**PRE-TREATMENT**

The Equaura process requires parts to be chemically clean prior to plating. Where available, pre-treatment should be identical to that used for electroplating gold; ie. alkaline cleaning followed by a dilute acid dip. Where a nickel surface is to be plated, a 10% hydrochloric acid dip following cleaning will serve to overcome any problems resulting from passivity.

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**BATH MAINTENANCE**

On make-up, the gold content of the solution is 0.5 Oz. Av. Per gallon(3.1g/L)  
Almost all this gold may be plated from the solution, provided operating instructions are adhered to.

The drag-out should be used to keep the bath level topped-up, thus ensuring that the solution does not become over concentrated and that a minimum of gold is wasted.

When the solution is not in use the tank should be kept covered.

**NOTES**

Slowing Down Salts

These salts are recommended in cases where Equaura is to be applied to electrodeposited nickel. These salts slow down the rate of reaction, thus ensuring good adhesion of the deposit as well as making the deposition process more controllable. The entire pack of S.D. Salts equivalent to 4.4 g/L should only be added after the Equaura salts have dissolved in hot water, and not before.

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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 Names</u>            | <u>Product Number</u> |
|---------------------------------|-----------------------|
| Equaura Immersion Gilding Salts | 079002                |
| Equaura Slowing Down Salts      | 063009                |

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