

PROCIRC 961

ANTITARNISH

INTRODUCTION

Procirc Antitarnish 961 is a simple chromate-free, immersion process which protects copper laminate or plated copper from tarnishing while in storage. Applications include the treatment of raw laminate prior to processing, interstage storage during processing or storage of finished boards prior to assembly.

BENEFITS

- Effective on bare copper
- Retains solderability for long periods
- Versatile at all stages of p.c.b. production
- Exceptionally dilute make-up for economical use

SOLUTION MAKE-UP

Procirc Antitarnish 961 1% v/v (aqueous)

OPERATING DATA

Concentration	1% v/v
Temperature	25 - 60°C (See NOTES)
Time Typical values	10 secs - 2 minutes

EQUIPMENT

Tanks	Polypropylene, PVC or stainless steel
Heaters	PTFE or stainless steel immersion heaters with thermostatic control.

INSTALLATION

It is essential that the tanks to be used for Procirc 961 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. Half fill the clean empty tank with water.
2. Add the appropriate amount of Procirc 961
3. Fill to operating level with water and mix.
4. Heat to operating temperature.



PROCESS SEQUENCE

1. Procirc 961
2. Dry

MAINTENANCE AND CONTROL

The concentration of the Procirc 961 can be controlled by analysis as detailed in the Appendix. After additions totalling 15ml/L have been made the solution should be renewed.

Pre-treatment - Surfaces entering the Procirc 961 solution should preferably be of an alkaline nature. Acidic surfaces should therefore be neutralised in a 50g/L solution of sodium carbonate and rinsed before entering the Procirc 961 solution.

Temperature - Use of the higher temperatures (50-60°C) will allow reduced process times (10-15 seconds) and will help faster drying.

Post Treatment - It is not recommended that the work should be rinsed after treatment in Procirc 961 as this will slightly reduce the corrosion protection.

ANALYSIS METHOD

Reagents

10% w/v copper sulphate solution.

1% Procirc 961 solution. This should be made-up with standard solution accuracy.

Method

1. To 3 graduated centrifuge tubes add 1, 1.5ml and 2 ml respectively of the standard 1% Procirc 961 and label as standard 1,2 and 3 respectively.
2. To a fourth graduated centrifuge tube, add 2ml of the working Procirc 961 bath.
3. Fill the tubes to the same mark with 10% copper sulphate solution.
4. Mix thoroughly and allow to stand for 15 minutes.
5. Centrifuge until the precipitate is accumulated at the bottom of the tube.
6. Compare the heights of the precipitates and from this estimate the concentration of the working bath.

Calculation

Precipitate height = standard 3: no addition required.

Precipitate height = standard 2: Add 2.5ml/L Procirc 961.

Precipitate height = standard 1: Add 5 ml/L Procirc 961.

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
Procirc 961 Antitarnish	964003

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