PROCIRC 1120

Aqueous Developer

INTRODUCTION

Procirc 1120 Aqueous Developer is ideal for the development of aqueous dry films and liquid photo-imageable soldermask systems.

BENEFITS

- 250g/L liquid concentrate – eliminates handling and storage of dry powder
- Does not contain toxic glycol ethers
- Consistent performance
- Instant mixing – no waiting for powders to dissolve

SOLUTION MAKE -UP

PROCIRC 1120 Aqueous Developer 4% v/v with water

OPERATING DATA

Concentration	3 - 5%
Potassium Carbonate	7.5 - 12.5g/L
pH	10.4 - 11.5
Temperature	25 - 40°C
Filtration	Continuous in line
Extraction	Recommended

EQUIPMENT

Tanks	Polypropylene, unplasticised PVC, Stainless Steel, titanium, hastealloy
Heaters	PTFE, Teflon coated or stainless steel immersion heaters with thermostatic control
Filtration	Continuous in line

INSTALLATION

It is essential that the tanks to be used for Procirc 1120 Aqueous Developer 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. Fill the clean empty tank with the required volume of water.
2. Add the required volume of Procirc 1120 Aqueous Developer and mix thoroughly.
3. Heat to operating temperature.

MAINTENANCE AND CONTROL

Evaporation losses should be replaced with water.

Maintain at pH 11 by additions of Procirc 1120 Aqueous Developer.

When developing time becomes excessive or pH is not maintained above 10.4, the solution should be discarded and a new one prepared.

As a guide 1lt of solution will process approximately 0.3m^2 of resist.

ANALYSIS METHOD

PROCIRC1120 Developer Concentration

Reagents

0.1N Hydrochloric Acid (standard volumetric solution).

Methyl Orange Indicator.

Method

1. Pipette a 10 ml sample of the working solution into a 250 ml flask.
2. Add approximately 100 mls of DI water and mix thoroughly.
3. Add a few drops of methyl orange indicator.
4. Titrate with 0.1N Hydrochloric Acid to the first orange end point.
5. Record titre = t mls.

Calculation

t mls x 0.276 = concentration (%) Procirc 1120.

t mls x 0.69 = g/L Potassium Carbonate.

Replenishment

To increase the concentration by 0.5% Procirc 1120 (1.25g/L Potassium Carbonate) add 5 ml per litre of the Procirc 1120.

NOTES

During use, dissolved photo polymers will cause the bath to foam. Procirc 1402 Anti-foam should be added initially at 1-3ml/L then in 0.25ml/L increments as required to control the foam.

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 1120 Aqueous Developer	945047
PROCIRC 1402 Anti-Foam	964031

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