

PMD (UK) LTD PROCESS DATA

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9026-06/02
ISSUE 4
PREV 3

PROCIRC 9026 CONDITIONER

INTRODUCTION

Procirc 9026 Conditioner has been specifically developed for the pretreatment of copper to enhance consistent etching with Procirc 9550 Cirbond.

BENEFITS

Uniform copper conditioned finish.

Allows consistent treatment of copper with Procirc 9550 Cirbond.

Low process cost.

SOLUTION MAKE-UP

Procirc 9026 Conditioner

10% v/v with deionised water.

OPERATING DATA

| | | |
|---------------|------------------------------|--|
| Concentration | 10% v/v nominal. | |
| Temperature | 25-50°C. | |
| Time | Typical values | Spray 30 - 90 secs. Dip 1 - 3 mins. |
| Agitation | Preferred but not essential. | |
| Extraction | Recommended. | |

EQUIPMENT

| | |
|---------|---|
| Tanks | Stainless steel, titanium, polypropylene, polyethylene or unplasticised PVC. |
| Heaters | Teflon coated, titanium, PTFE, stainless steel all with thermostatic control. |

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INSTALLATION

It is essential that the tanks to be used for Procirc 9026 Conditioner are thoroughly cleaned and leached before any product is introduced.

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

1. Fill the clean empty tank with the appropriate volume of deionised water.
2. Add the required amount of Procirc 9026 Conditioner and mix thoroughly.
3. Heat to operating temperature.

PROCESS SEQUENCE

1. Acid or alkali clean.
2. Rinse.
3. Rinse.
4. Rinse.
5. Procirc 9026 Conditioner.
6. Rinse.
7. Rinse.
8. DI Rinse (optional).*
9. Procirc 9550 Cirbond.
10. Rinse.
11. Rinse.
12. DI Rinse (optional).*
13. Dry.

* Dependent upon water quality.

MAINTENANCE AND CONTROL

The solution should be analysed regularly and replenished as necessary. (See analysis method).

Evaporation losses should be replaced with deionised water.

Concentration losses should be replaced with Procirc 9026 Conditioner.

ANALYSIS METHOD

Reagents

1.0 N hydrochloric acid (standard volumetric solution).
Methyl red indicator.

Method

1. Pipette 20 ml working solution into a 250 ml conical flask.
2. Add approximately 50 ml water and mix thoroughly.
3. Add 2 - 3 drops of methyl red indicator and mix thoroughly.
4. Titrate with 1.0 N hydrochloric acid to red end point.
5. Record titre = t ml.

Calculation

$t \times 1.03 = \% \text{ concentration Procirc 9026 Conditioner.}$

Replenishment

For every 1% drop in concentration add 10ml/l Procirc 9026 Conditioner.

DISPOSAL

Dispose of in accordance with local authority requirements.

PRODUCT FAMILIES

The following products are referred to in this data sheet.

| <u>Product Name</u> | <u>Product Number</u> |
|-----------------------------|-----------------------|
| Procirc 9026 Conditioner | 905002 |
| Procirc 9550 Cirbond Part A | 957003 |
| Procirc 9550 Cirbond Part B | 957004 |

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