

# PMD (UK) LTD PROCESS DATA

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9402-02/00  
ISSUE 2  
PREV 1

# PROCIRC 9402

## AQUEOUS DEVELOPER

### INTRODUCTION

Procirc 9402 Aqueous Developer is a liquid concentrate of high purity potassium carbonate, suited to the development of aqueous dry films. It is formulated with water softening agents to prevent the accumulation of water hardness scale in equipment.

### BENEFITS

Liquid concentrate - eliminates handling and storage of dry powder.

Quality Controlled - constant high purity and known concentration for ease of dosing and make up.

Does not contain toxic glycol ethers.

Instant mixing - no waiting for powders to dissolve.

Prevents scale build up in developer process equipment.

### SOLUTION MAKE-UP

Procirc 9402 Aqueous Developer                      2 - 8% v/v with water.

### OPERATING DATA

Concentration	2 - 8% v/v.
Temperature	25 - 45 deg C.
Filtration	Continuous in line filtering.
Extraction	Recommended.

### EQUIPMENT

Tanks	Polypropylene, unplasticised PVC, stainless steel, titanium, hastelloy.
Heaters	PTFE or stainless steel immersion heater with thermostatic control.
Filtration	Continuous in line filter.

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### INSTALLATION

It is essential that tanks to be used for Procirc 9402 Aqueous Developer are thoroughly cleaned and leached before any chemistry is introduced.

Contact PMD (UK) Limited for appropriate procedure.

1. Fill the clean empty tank with the appropriate volume of water.
2. Add the appropriate volume of Procirc 9402 Aqueous Developer and mix thoroughly.
3. Heat to operating temperature.

### MAINTENANCE AND CONTROL

Evaporation losses should be replaced with water.

The solution should be regularly analysed and replenished with Procirc 9402 Aqueous Developer. (See analysis methods).

### ANALYSIS METHOD

#### Procirc 9402 Aqueous 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 ml of 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 ml.

##### Calculation

$t \text{ ml} \times 0.19 = \text{concentration (\%)} \text{ Procirc 9402.}$

##### Replenishment

To increase the concentration by 1% add 10 ml per litre of the Procirc 9402 Aqueous Developer.

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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>
Procirc 9402 Aqueous Developer (25L)	945027
(200L)	945028
(1000L)	945029

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