



# PROCIRC 1175K

## Aqueous Developer

### INTRODUCTION

PROCIRC 1175K Aqueous Developer is a highly concentrated liquid of high purity potassium carbonate, suited to the development of aqueous dry films. It also contains hydroxide to give buffering and extended life.

### BENEFITS

- 750g/L 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
- Contains hydroxide buffer

### SOLUTION MAKE -UP

MFS 1175K Aqueous Developer      1.0-1.6% v/v with water.

### OPERATING DATA

|                     |                              |
|---------------------|------------------------------|
| Concentration       | 1.0 – 1.6% v/v               |
| Potassium Carbonate | 7.5 – 12.5 g/L               |
| Temperature         | 25 - 45°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.                                              |

### INSTALLATION

It is essential that tanks to be used for PROCIRC 1175 Aqueous Developer are thoroughly cleaned and leached before any chemistry is introduced.

Contact PMD Chemicals Limited for appropriate procedure.



1. Fill the clean empty tank with the appropriate volume of water.
2. Add the appropriate volume of MFS 1175K 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 1175K Aqueous Developer. (See analysis methods).

## ANALYSIS METHOD

PROCIRC 1175K 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 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

$t \times 0.092 = \text{concentration (\%)} \text{ PROCIRC 1175K.}$

$t \times 0.69 = \text{g/L Potassium Carbonate.}$

### Replenishment

To increase the concentration by 0.1% PROCIRC 1175K (0.75g/L Potassium Carbonate) add 1ml per litre of PROCIRC 1175K Aqueous Developer.

## 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 1175K Aqueous Developer (25L) | 945036         |

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