

# MFS 1310

## COPPER POLISH

### INTRODUCTION

MFS 1310 Copper Polish is an acidic process designed to quickly polish copper and brass surfaces.

### BENEFITS

Rapid polishing action.

Non-complexing.

Non-nitric.

### SOLUTION MAKE-UP

MFS 1310 Part A	100ml/L
MFS 1310 Part B	250ml/L
Water	to 1 litre

### OPERATING DATA

Temperature	Copper	40-55°C
	Brass	27-45°C

Time	0.5 – 5 minutes.
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### EQUIPMENT

Tanks	Polypropylene, PVC or polyethylene.
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Heaters	PTFE coated with thermostatic control.
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## **INSTALLATION**

It is essential that the tanks to be used for MFS 1310 Copper Polish 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. Half fill tank with water.
2. Add the required volume of MFS 1310 Parts A and B.
3. Make up to volume with water and mix thoroughly.
4. Heat to operating temperature.

## **PROCESS SEQUENCE**

1. Alkaline clean.
2. Rinse.
3. MFS 1310 Copper Polish.
4. Rinse.
5. 5% sulphuric acid dip.
6. Rinse.
7. Continue depending on application.

## **MAINTENANCE AND CONTROL**

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

Discard the solution when copper reaches 3gm/L.

## **ANALYSIS METHODS**

1. MFS 1310 Part A

### Reagents

0.1N sodium hydroxide (standard volumetric solution)  
Methyl red indicator

### Method

1. Pipette a 5.0ml aliquot of the solution into a 250ml conical flask.
2. Add 100ml DI water.
3. Add 6-8 drops methyl red indicator.
4. Titrate to a yellow end point using 0.1N sodium hydroxide.
5. Record titre = t mls.

### Calculation

$t \times 11.1 = \text{ ml/L MFS 1310 Part A.}$

## ANALYSIS METHODS CONT.

### 2. MFS 1310 Part B

#### Reagents

0.1N potassium permanganate (standard volumetric solution)  
25% v/v sulphuric acid

#### Method

1. Pipette a 1.0ml sample of the working solution into a 250ml conical flask.
2. Add 50ml DI water and 10ml 25% v/v sulphuric acid.
3. Titrate to a permanent pink end point with 0.1N potassium permanganate.
4. Record titre = t mls.

#### Calculation

$t \times 5.6 =$  ml/L MFS 1310 Part B.

### 3. Copper content

#### Reagents

0.1M EDTA (standard volumetric solution)  
Acetate buffer (105g/L sodium acetate, 100ml/L acetic acid)  
PAR indicator

#### Method

1. Pipette a 5.0ml aliquot of the working bath into a 250ml conical flask.
2. Add 80ml DI water.
3. Add 20ml acetate buffer.
4. Add 4 – 6 drops PAR indicator and titrate to a green end point with 0.1M EDTA.
5. Record titre = t mls.

#### Calculation

$t \times 1.27 =$  g/L copper.

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**DISPOSAL**

Dispose of in accordance with local authority requirements.

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**PRODUCT FAMILIES**

The following products are referred to in this data sheet.

<u>Product Name</u>	<u>Product Number</u>
MFS 1310 Part A	907033
MFS 1310 Part B	907034

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