

PMD PHOSCHROMATE

INTRODUCTION

PMD Phoschromate is a chromate and phosphate conversion process for aluminium and its alloys. The self coloured film offers excellent corrosion resistance and an excellent base for subsequent painting or powder coating.

BENEFITS

Good corrosion resistance.

Promotes excellent paint and powder coating adhesion.

Self healing properties. If scratched the coating will reform a protective layer.

Supplied as a liquid concentrate for ease of handling.

SOLUTION MAKE-UP

PMD Phoschromate 10%v/v with water.

OPERATING DATA

Concentration	5-15% v/v.
Temperature	25-30°C.
Immersion time	1-5 mins.
Extraction	Recommended.

EQUIPMENT

Tanks	Stainless steel, PVC, moulded polyethylene, polypropylene or neoprene lined mild steel.
Heating	Stainless steel or PTFE immersion heater with thermostatic control, steam coil or water jacket.

INSTALLATION

Equipment to be used for PMD Phoschromate should be cleaned thoroughly before any product is added.

1. Fill the clean empty equipment with the appropriate amount of water.
2. Add the required amount of PMD Phoschromate concentrate and mix thoroughly.
3. Heat to operating temperature.

PROCESS SEQUENCE

1. PMD 505 Cleaner.
2. Rinse.
3. Alkaline etch, if required, using PMD 606LF Cleaner.
4. Rinse.
5. De-smut, if required, using PMD Alchromate Pre-Dip.
6. Rinse.
7. PMD Phoschromate.
8. Rinse (Drag out).
9. Rinse.
10. Dry in warm air, maximum 50⁰C.
11. Where applicable, apply the appropriate coating as soon as possible.

MAINTENANCE AND CONTROL

The solution should be regularly analysed and replenished as necessary.

Evaporation losses should be replaced using water. Concentration losses should be replaced with PMD Phoschromate concentrate.

ANALYSIS METHOD

PMD Phoschromate concentration

Reagents

50% v/v Sulphuric acid.

0.1N Ferrous ammonium sulphate (Standard volumetric solution).

0.1N Potassium permanganate (Standard volumetric solution).

Method

1. Pipette a 10ml sample of the working solution into a 250ml conical flask.
2. Add approximately 150ml of deionised water and mix well.
3. Add 20ml of 50% v/v Sulphuric acid and mix well.
4. Cover the flask and boil for 10 minutes.
5. Cool the flask.
6. Pipette 25ml of 0.1N ferrous ammonium sulphate into the flask and mix well.
7. Titrate with 0.1N Potassium permanganate to a pink end point.
8. Record titre = t mls.

Calculation

$(25 - t) \times 0.95 = \% \text{ v/v Phoschromate concentrate.}$

Replenishment

For every 1% drop in concentration, add 10ml/l of PMD Phoschromate concentrate.

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DISPOSAL

Dispose of in accordance with local authority requirements.

PRODUCT FAMILIES

The following products or families of products are referred to in this data sheet.

<u>Product Name</u>	<u>Product Number</u>
PMD Phoschromate Concentrate	237006
PMD 505 Cleaner	206001
PMD 606LF Cleaner	206002
PMD 707 Cleaner	205003
PMD Alchromate Pre-Dip	237004

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