



NICKEL BK

BLACK NICKEL

INTRODUCTION

Nickel BK is a specially modified nickel bath which gives a thin black deposit. It is typically used for decorative finishes. Deposits of Nickel BK can be post treated in clear lacquer to further enhance corrosion resistance. Nickel BK can be used in rack and barrel applications.

BENEFITS

- Wide current density range
- Easy to maintain

SOLUTION MAKE -UP

Nickel BK Salts 143 g/L

OPERATING DATA

Nickel BK Salts	130 – 160g/L
Boric acid	3 – 7g/L
Density	6-10 Be
pH	5.0 – 6.0
Temperature	20 – 50°C
Cathode cd	0.1 – 1.0 asd
Anodes	Depolarised nickel.

EQUIPMENT

Tanks	Steel or GRP lined with Moulded polythene or polypropylene. Welded PVC or polypropylene.
Heaters	PTFE or titanium clad electric immersion heaters.
Filtration	Continuous filtration recommended.
Extraction	Required



INSTALLATION

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

If in any doubt as to the cleaning procedure please contact PMD Chemicals Technical Department.

1. Leach the plating tank with 5% v/v sulphuric acid at 60°C overnight. Pump out and rinse the tank thoroughly.
2. In a separate tank heat deionised water to 65 – 70°C and dissolve the Nickel BK Salts.
3. Filter the solution into the plating tank and adjust to the correct volume with deionised water.
4. Allow to cool to the desired operating temperature (see notes).

MAINTENANCE AND CONTROL

The solution is maintained by density. Add Nickel BK Salts to maintain the required density.

If a satisfactory black is not obtained add Nickel BK Replenisher at 1.5 -3g/L until the colour is restored. These should be pre-dissolved in plating solution before adding to the main tank.

The pH should be maintained within the recommended limits by 10% w/v sulphuric acid to decrease. During normal operation the pH tends to increase.

NOTES

pH	Operating at pH 5.0 will give harder and more intense black deposits.
Temperature	Lower temperature gives a more intense black. At higher temperatures a lighter black/graphite finish is obtained.
Time	For rack 2 – 5 mins is sufficient to give a black deposit. For barrel the time will vary depending on the articles being plated.
Substrate	Copper or copper alloys can be plated directly. Steel articles should be pre coated with bright nickel. Zinc based die cast can be plated using normal pretreatments to copper and nickel plating.

Post treatment Finished articles should be lacquered or oiled to preserve the finish.

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
Nickel BK Salts	543001
Nickel BK Replenisher	543002

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