

TECHNICAL DATA SHEET

NITEK NI 855

ELECTROLESS NICKEL BATH FOR HIGH PHOSPHOROUS

Nitek Ni 855 is highly stable electroless nickel bath that rapidly deposits uniform conductive coating on steel, light alloys, titanium, copper etc.

Nitek Ni 855 process is very stable and easy to control. The deposits speed is rapid and constant.(18-20microns /hour).

Nitek Ni 855 gives remarkable hardness, weight resistance and corrosion resistance.

Nitek Ni 855 gives hardness of 450-550VH and after heat treatment for 1 hour and 400°C gives hardness of 900VH.

HOW TO USE NITEK NI 855

OPERATING CONDITIONS:

Concentration	optimum	Range
Nitek Ni 855 A	200 ml/l	200-210 ml/l
Nitek Ni 855 B	100 ml/l	100-110 ml/l
Temperature	90°C	88-91°C
pH	4.7	4.6-4.9

MAKE-UP:

To Make-up 100 liters:

- Fill the tank about 2/3rd full with deionised or distilled water.
- Add 20 liters of Nitek Ni 855 A and mix thoroughly.
- Add 10 liters of Nitek Ni 855 B and mix thoroughly.
- Fill to final volume with deionized or distilled water and stir.
- Heat the solution to 88-90°C. check the pH and adjust if necessary using 25% ammonia or sulphuric acid(10%).

OPERATION & MAINTENANCE:

- **Nitek Ni 855 A** and **Nitek Ni 855 B** are used for initial **Make up**.
- For **Nitek Ni 855 B** and **Nitek Ni 855 C** are used for **Maintenance**.
- Maintain nickel concentration in the range 5.5-8.5gm/l by checking nickel metal by volumetric titration given under heading CONTROL .
- For each gm of nickel deposited add **20ml Nitek Ni 855 B** and **15ml Nitek Ni 855 C**.
- Loading should be 0.6-3.0dm²/l.

FITRATION:

For optimum results it is recommended that the Nitek Ni 855 solution be batch filtered once a week and the plating tank be cleaned before medium should be used. Continuous overflow filtration may also be used.

EQUIPMENT:

- 316SS, Anodically polarized tanks are recommended. Polyethylene or polypropylene tanks can also be used.
- Heating coils should be of ceramic or stainless steel. Thermostatic control should maintain the temperature to $\pm 1^{\circ}\text{C}$.
- Filtration equipment with PP pump body and 5-10microns cartridge filter in PP able to withstand 95^oC is recommended.
- An abstraction system to remove fumes / vapours is essential for good health.

CONTROL:

ANALYSIS FOR NITEK NI 855 A:

PROCEDURE:

- Take 5ml of solution in Erlenmeyer flask.
- Add 50ml DM water. Add Ammonia till color turns blue.
- Add 1-2 gm of murexide indicator.
- Titrate with 0.1 M EDTA till end point violet color.

CALCULATION:

$$\frac{\text{Burate Reading} \times 58.69 \times 0.1 \text{ M EDTA}}{5} = \text{gms/l nickel metal}$$

WASTE TREATMENT:

Nitek Ni 855 solutions are acidic in nature. Neutralize the solution before discharging into sewage system.

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