

# Depositing Nickel using electroless plating system

INRF application note  
Process name: ELESSNI01

## Overview

Nickel films can be easily deposited using electroless nickel plating. The substrate must be compatible with this process. Usually (though not always), this requires a conductive surface. Often, a palladium or tin catalyst treatment must be applied to the surface before plating can occur. This is a level-2 process; it requires super user instruction.

## Time needed

Typical process takes 30 minutes to complete.

## Materials needed

- Electroless nickel plating solution
- Glass container with cover
- Thermometer
- Hot plate

## Surface preparation

If the surface is not ready for electroless nickel plating, it must first be dipped into a palladium or tin catalyst treatment.

## Plating

Pour the electroless nickel plating solution into the glass container to make a bath. Heat the container to 90 deg C on a hot plate. Immerse the object to be plated. Plating occurs at **XX microns/minute**. The plating is usually of high quality. The metal properties depend on the nickel solution chosen.

## Clean up

The electroless nickel plating solution may be reused. Return the bottle labeled “Used electroless Ni solution” which contains your name and date that it was first created. Once the nickel solution has become depleted, it must be disposed in the appropriate waste container.

## References

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### Electroless nickel plating

#### Checklist

The following checklist is designed to aid the researcher when performing this process.

Surface prepared for electroless nickel

Heat nickel bath to 90 deg C

Immerse sample in plating solution. Plating occurs at XX microns/minute

Inspect sample

Let nickel solution cool down. Return to appropriate bottle

Waste nickel disposed in special waste container