

Operating Instructions – Nickel Strike for Stainless Steel and Nickel

Product Description

Nickel Strike is used for the activation and pretreatment of stainless steel and nickel surfaces prior to electroplating. The process removes passive oxide layers while simultaneously depositing a thin nickel strike layer, significantly improving adhesion of subsequent electroplated coatings.

This helps prevent peeling or delamination of later plating layers.

Suitable for:

Stainless steel

High-alloy steels

Nickel surfaces

Pretreatment before nickel, copper, chromium, or precious metal plating

Required Equipment

Nickel Strike solution

Power supply / rectifier

Nickel anode

Brush plating tool or immersion tank

Acid-resistant container

Safety goggles

Chemical-resistant gloves

Protective clothing

Rinse water

Safety Precautions

Before starting work:

Ensure adequate ventilation

Wear chemical-resistant gloves and eye protection

Avoid skin and eye contact

Do not inhale vapors or aerosols

Do not contaminate cleaned parts by touching them with bare hands

The product contains hydrochloric acid and nickel compounds. It is corrosive and may cause allergic skin reactions and respiratory irritation.

1. Preparation of the Workpiece

Thoroughly degrease and clean the workpiece.

Ensure the surface is free from oil, grease, and dirt.

Do not touch the cleaned surface with bare hands.

If necessary:

mechanically abrade

pickle

activate the surface

2. Electrical Connection

Stainless Steel Treatment

Component Connection

Component Connection

Nickel anode Positive (+)

Workpiece Negative (-)

Nickel Treatment (Reverse Polarity)

Component Connection

Nickel anode Negative (-)

Workpiece Positive (+)

3. Treatment with External Power Supply

Immersion or Brush Plating Process

Treat the workpiece in the Nickel Strike solution until the oxide layer is removed and a thin nickel layer has been deposited.

Typical Operating Parameters

Parameter	Recommendation
Tank plating voltage	Approx. 1.5 – 5 V
Brush plating voltage	Approx. 2.5 – 6 V
Current density	Approx. 10 – 30 A/dm ²
Operating temperature	20 – 50 °C
Treatment time	Approx. 2 – 5 minutes

After treatment:

Briefly rinse the workpiece with water.

Do not touch the activated surface.

Proceed immediately with subsequent plating.

Oxide layers may reform quickly, therefore further coating should be carried out without delay.

4. Use Without External Power Supply

Chemical activation without an external power supply is also possible.

Procedure

Fully immerse the workpiece in Nickel Strike.

Maintain a temperature between 20 – 50 °C.

Treat for 10 – 30 minutes.

Rinse thoroughly afterward.

Proceed immediately with electroplating.

5. Process Notes

Mild movement of the workpiece improves uniformity.

Clean nickel anodes regularly.

Avoid contamination of the electrolyte.

Use only acid-resistant containers.

Do not mix with oxidizing agents.

6. Personal Protective Equipment

Recommended PPE:

Safety goggles according to EN 166

Butyl rubber chemical-resistant gloves

Chemical-resistant protective clothing

Respiratory protection where aerosols may occur

7. Storage

Store in a cool, well-ventilated area

Keep container tightly closed

Store only in original packaging

Protect from heat

Keep away from food and beverages

Keep separate from oxidizing agents

Storage class: 8B – non-flammable corrosive substances.

8. Disposal

Product residues and contaminated packaging:

Do not dispose of with household waste

Dispose of according to local and national regulations

Prevent release into drains or waterways