

Technical Data Sheet – Nickel Strike for Stainless Steel Electroplating

Product Name

Nickel Strike – Activation and adhesion-promoting nickel solution for electroplating stainless steel surfaces.

Application

Nickel Strike is designed for the removal of passive oxide layers from stainless steels and for producing an adhesion-promoting nickel layer prior to electroplating operations.

Suitable for:

- **Stainless steel components**
- **High-alloy steels**
- **Passive metal surfaces**
- **Pre-treatment before nickel, copper, or chromium plating**

Functional Principle

The solution chemically removes the chromium oxide layer from stainless steel surfaces and deposits a thin, highly adherent nickel strike layer. This improves adhesion for subsequent electroplated coatings.

Technical Properties

Property	Value
Physical state	Liquid
Color	Green
Odor	Characteristic
pH value (20 °C)	Approx. 1
Density	1.0 – 1.1 g/cm³
Boiling point	Approx. 100 °C
Water solubility	Miscible
Storage class	8B
UN number	UN 3264
Packing group	II

Main Chemical Components

Component	Concentration
Hydrochloric acid	15 – <20 %

Component	Concentration
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Citric acid	1 – <2.5 %
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Acetic acid	1 – <2.5 %
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Succinic acid	<3 %
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Lactic acid	0.5 – <1 %
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Nickel compounds <0.1 %

Typical Operating Parameters

Parameter	Recommendation
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Bath temperature	Ambient to 35 °C
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Treatment time	30 seconds to 3 minutes
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Current density	2 – 10 A/dm²
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Anode material	Nickel
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Agitation	Mild solution movement recommended
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Actual operating parameters depend on substrate material, surface condition, and subsequent plating process.

Recommended Process Sequence

- 1. Degreasing**
- 2. Rinsing**
- 3. Pickling / Activation**
- 4. Nickel Strike treatment**
- 5. Rinsing**
- 6. Subsequent electroplating (nickel, copper, chromium, etc.)**

Advantages

- Excellent adhesion on stainless steel**
- Effective activation of passive surfaces**
- Improved coating adhesion**
- Suitable for complex geometries**
- Industrial electroplating compatibility**

Safety and Handling

CLP Classification

- **Met. Corr. 1 – H290**
- **Skin Corr. 1 – H314**
- **Eye Dam. 1 – H318**
- **Skin Sens. 1 – H317**
- **STOT SE 3 – H335**

Hazard Statements

- **Causes severe skin burns and eye damage**
- **May cause allergic skin reactions**
- **May cause respiratory irritation**

Personal Protective Equipment

- **Chemical safety goggles**
- **Acid-resistant gloves (butyl rubber recommended)**
- **Protective clothing**
- **Respiratory protection where aerosols or vapors occur**

Storage Conditions

- **Store in a cool, well-ventilated area**
- **Keep only in original containers**
- **Protect from oxidizing agents**
- **Keep away from food and beverages**

Transport Information

Parameter Value

UN Number UN 3264

Proper Shipping Name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Hazard Class 8

Packing Group II

Environmental Information

- **Water hazard class: WGK 1 (slightly hazardous to water)**
- **Prevent release into drains or waterways**

Manufacturer / Supplier

[REAL-GOLD / Betzmann Galvanik](#)

Source Documentation

Prepared based on Safety Data Sheet "Nickel-Strike", Revision 1.02 dated 02 July 2025.