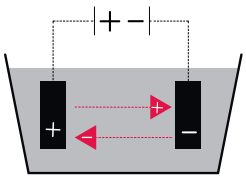
HTS Galvanic Nickel

the next dimension in technical nickel plating

aalberts surface technologies

HTS Galvanic Nickel

In a world where precision, reliability, and material performance determine success, **HTS Galvanic Nickel** sets new standards. This advanced electroplating process is based on proven sulfamate nickel technology - but with significantly improved performance and optimized process control. The result: a nickel coating with low internal stresses that not only meets the highest technical requirements but also opens up new possibilities in industrial applications.



technology that inspires – features that impress

HTS Galvanic Nickel provides a s**ulfur-free, high-purity nickel coating** that is characterized by its uniformity and ductility. The surface has an elegant silk matt to semi-gloss finish with a homogeneous and fine-grained coating structure.

versatility in application – from micro to macro

Whether as a diffusion barrier layer, technical functional layer, or for thick-film nickel plating, HTS Galvanic Nickel is a true all-rounder. The layer thicknesses range from a few micrometers to several millimeters, offering maximum flexibility for a wide variety of industrial requirements.

Thanks to the **high deposition rate**, the process is particularly economical and efficient – ideal for serial production and large-volume applications. At the same time, the quality remains consistently at the highest level.

material compatibility and further processing

HTS Galvanic Nickel is universally applicable: It is suitable for coating of steels, stainless steels, non-ferrous metals, aluminum alloys, titanium, and even high-melting metals such as molybdenum, tantalum, tungsten, and niobium. The resulting nickel layer is **easy to solder and weld** and provides an excellent adhesive base for further metallic coatings such as **gold, silver, or tin**, but also very suited for flame spraying processes such as tungsten carbide.

Particularly noteworthy is the **excellent ductility and uniformity** even at high layer thicknesses. It allows subsequent forming of the coated components without crack formation in the layer – a decisive advantage for the electronics industry, where components are often only finally processed after coating.

corrosion protection and chemical resistance

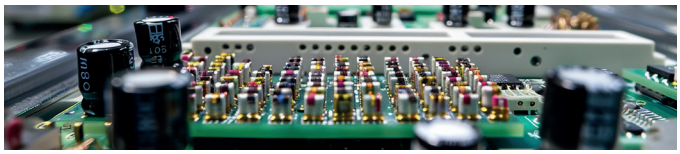
The HTS nickel coating provides **effective corrosion protection** on all metallic surfaces. It is resistant to **air, water, diluted acids, and most alkalis** – making it ideal for applications in demanding environments.

With a **hardness of approx. 200 HV** and a melting point of 1435 °C, the coating is also mechanically and thermally highly resilient. Its **high thermal conductivity** also makes it interesting for thermally sensitive applications. Its resistance to extremely low temperatures is also of great value – meaning that this coating even retains its excellent properties in space.

forward-looking areas of application

HTS Galvanic Nickel is used in numerous key industries:

- **Electronics industry:** As a solderable surface or diffusion barrier layer for highly complex plug-in and solder contacts.



- **Medical technology and precision engineering:** Where maximum precision and material purity are required.

- **Hydrogen technology:** In the coating of anodes, cathodes, and bipolar plates for electrolyzers.

- **Aerospace:** For components that must retain their properties even at extremely low temperatures.

- **Automotive and aerospace:** For busbars that can be severely deformed after coating.

Melting point:	1445 °C
Hardness:	150-300 Hv
Elongation:	5-30 %
Electrical resistance:	68 x 10 -9 Ωm

HTS Galvanic Nickel – your solution for demanding surfaces

With HTS Galvanic Nickel, you are choosing a process that is not only technically superior, but also economically convincing.

Put your trust in the future of electroplating nickel – put your trust in HTS Galvanic Nickel.

Aalberts Surface Technologies Deurne B.V.
Vuurijzer 1 | 5753 SV Deurne | the Netherlands
Phone: +31 493 352 820
deurne@aalberts-st.com

Aalberts Surface Technologies B.V.
Hurksestraat 32 | 5652 AL Eindhoven | the Netherlands
Phone: +31 402 5076 07
eindhoven@aalberts-st.com