



Nickel S-Pellets™

Nickel S-Pellets™ are a high purity form of sulphur-activated nickel widely used for electroplating with titanium anode baskets. S-Pellets™ are produced by a unique carbonyl gas refining process at the Clydach Nickel Refinery in the UK.

The controlled and consistent purity of S-Pellets™ and the advantages associated with its distinctive shape and sulphur activation make this product attractive for high-end plating (e.g. high-speed, engineering, electronics, electroforming) with titanium anode baskets:

- Carbonyl refining produces the purest form of nickel available.
- Sulfur activation promotes uniform dissolution and low operating voltage, even in chloride-free plating baths.
- Unique shape prevents the formation of bridges and voids in the basket.
- Settles uniformly in basket, ensuring uniform current density and high quality deposits.
- Flows easily into regular and shaped baskets with standard mesh sizes.
- Ideal for use with automated basket loading devices.
- Safe to handle (no sharp edges).
- Dissolves at 100% anode efficiency in common nickel plating solutions — with or without chlorides.
- Dissolution produces minimal metallic residues.
- Assured to the Copper Mark Joint Due Diligence Standard, in accordance with OECD Due Diligence Guidance for Responsible Supply Chains.
- Carbon intensity is 38.3 t CO₂e/t Ni, including scopes 1, 2, and 3 (upstream) emissions as of the most recent assessment year (2023)¹. Carbon intensity is reassessed on a regular basis.
- The sulphur in this product does not enter the plating solution; it forms an insoluble nickel sulphide residue, which is 100% contained using cloth anode bags, where it acts to remove unwanted copper impurities.

S-Pellets™ are produced in compliance with the following standards ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018.

For further information about our products, please visit our website (www.vale.com) or contact a regional sales representative.



10 kg bags, 5 bags per box,
20 boxes per pallet



1 tonne bag

Disclaimer: The product descriptions and specifications contained in this document are made in accordance with our analyses and the methods used to produce Vale's nickel products. While these descriptions and specifications are reflective of normal production lots, rather than each individual piece, such descriptions and specifications shall in no event be deemed or interpreted as any representation, warranty or commitment by Vale in connection with Vale's nickel products quality. Vale's nickel products quality shall be determined only in accordance with the corresponding contract terms for each transaction agreed between Vale and Vale's customer and the quality related certificate issued under such contract.

¹Independent third-party limited assurance to the general principles of ISO 14064-3 has been provided by Intertek Health Sciences Inc. Emissions allocated by economic value.

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Product Description

Form

- Spherical pieces of nickel
- Diameter: approximately 6 –14 mm

Packing Density

- Approximately 5.4 g/cm³ of basket capacity

Packaging

- 10 kg bags, 5 bags per box, 20 boxes per pallet (1,000 kg net weight)
- 1 tonne bulk bags

Typical analysis (wt %)

Ni*	>99.97
Co	<0.00002
Cu	<0.0001
C	<0.005
Fe	<0.004
S	~0.022–0.030
Pb	<0.000001
Zn	<0.00002

* Nickel determined by difference.