



High resolution SEM image of T255™ nickel powder

# T255™ Nickel Powder

T255™ is a high purity nickel powder with a fine, three dimensional filamentary (“chain like”) structure. T255™ is produced by a unique carbonyl gas refining process at the Clydach Nickel Refinery in the UK.

T255™ is recognized as an industry standard feed for the production of sintered rechargeable battery electrodes:

- Sinters readily to form a conductive, open porosity network.
- Uniform size distribution and density results in controlled porosity in sintered electrodes and other porous structures.
- Porosity strength relationship of sintered T255™ is well understood, enabling tailoring of porous structure.
- T255™ is widely used as a conductive additive in:
  - Batteries and fuel cells
  - Pigments in coatings, especially for electromagnetic interference (shielding) applications
  - Polymers for electronic applications to provide electrical conductivity
- Assured to the Copper Mark Joint Due Diligence Standard, in accordance with OECD Due Diligence Guidance for Responsible Supply Chains.
- Carbon intensity is 32.1 t CO<sub>2</sub>e/t Ni, including scopes 1, 2, and 3 (upstream) emissions as of the most recent assessment year (2022)<sup>1</sup>. Carbon intensity is reassessed on a regular basis.

T255™ is also used in powder metallurgical applications, as the filamentary structure can be broken down into fine primary particles.

T255™ is produced in compliance with the following ISO standards: ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

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



75 kg drum

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.

<sup>1</sup>Independent third-party limited assurance to the general principles of ISO 14064-3 has been provided by Intertek Certification GmbH.

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## Product Description

### Form

- Fisher sub sieve size: 2.2 – 2.6 μm
- Bulk density: 0.50 – 0.58 g/cm<sup>3</sup>
- Sieve test: ≤0.8 wt% +100#

### Packaging

- 75 kg steel drums, 6 or 12 drums per pallet

### Typical analysis (wt %)

|     | Typical  | Max   |
|-----|----------|-------|
| Ni* | >99.7    | –     |
| Co  | <0.00005 | –     |
| C   | <0.2000  | 0.25  |
| Fe  | <0.0030  | 0.01  |
| S   | <0.0002  | 0.001 |
| O   | <0.0750  | 0.15  |
| N   | <0.0100  | –     |

\* Nickel determined by difference.