

### Inco Type 287

*Inco Type 287 nickel powder is a fine filamentary, high purity particle developed and produced by Vale Inco carbonyl technology.*

*The unique morphology makes the powder ideally suited to the production of porous structures by loose sintering or for the formation of conductive networks in a variety of media.*

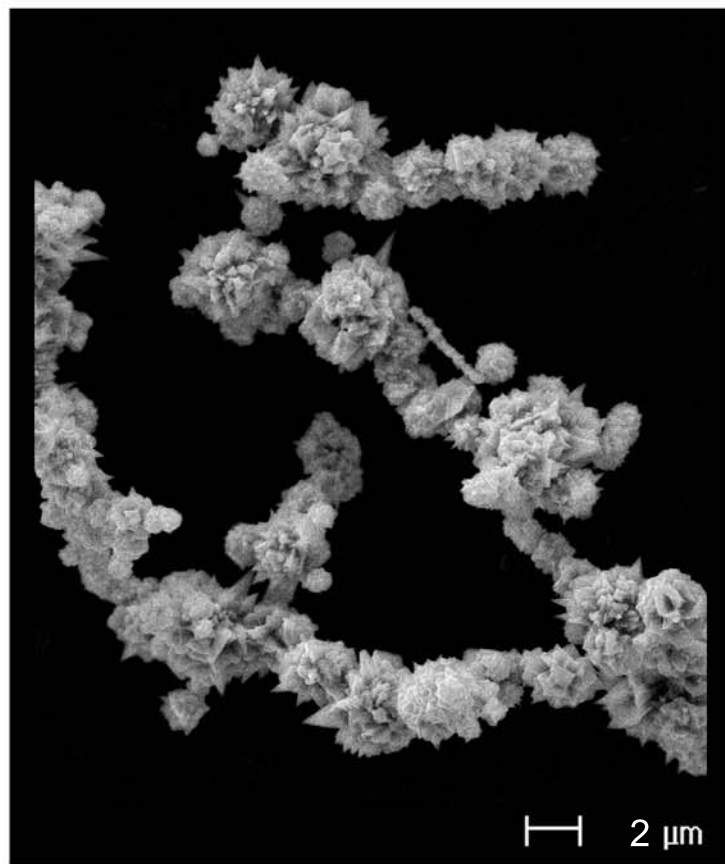
### Applications

*Inco 287 can be used for the production of porous electrodes, especially by so-called loose or dry sintering.*

*Inco Type 287 is used as a conductive additive in a variety of media including battery and fuel cell active materials, and as a conductive pigment in coatings, especially for EMI shielding applications.*

### Advantages

- Tight control of the particle size and bulk density of Type 287 provides well controlled porosity in battery electrodes and other porous structures.
- The relationship between Type 287 properties and the porosity and strength of sintered structures is well understood, enabling appropriate tailoring of porous structure properties.
- Provides a ferromagnetic component to shield-paints.
- Provides enhanced corrosion resistance in conductive coatings.
- Shorter filament length is less prone to agglomeration in dry mixing.
- Fine primary particle size can be advantageous in PM processing utilising aggressive mixing to break down the chainlike structure.
- High green strength due to the irregular powder shape.
- Enhances toughness and corrosion resistance in heavy metal, diamond and hard metal binder applications.



### Features

### Benefits

#### Shape

Three-dimensional filamentary structure

**Creation of 3-D Structure:**  
Allows production of uniformly porous sintered structures and conductive networks

#### Size Uniformity

Reproducible distribution of filamentary particles

**Consistent Performance:**  
With uniform, repeatable performance

#### Experience

Decades as a reliable supplier to the nickel battery industry worldwide

**Continued Commitment:**  
To meeting exacting customer specifications

#### Traceability

Each batch is tested and recorded from refinery to customer delivery

**Confidence in Sourcing:**  
Complete tracking 'paper trail', from refinery to finished product

#### ISO-9001

All powders are produced in ISO 9001 qualified refineries

**Conformance:** To stringent requirements that demand ISO 9001 standards

**Steel drum internally coated with protective, inert resin**

**Approximate Dimensions**

Diameter: 406 mm  
 Height: 646 mm  
 Net Weight: 100 kg  
 Gross Weight: 107 kg

**Multiples can be palletised and shrink-wrapped**



**UN Approved Packaging**

## Typical Chemical Composition

	Typical Wt %	Maximum Wt %
Carbon	0.9	0.3
Sulphur	0.0001	0.001
Oxygen	0.11	0.15
Nitrogen	0.002	n.d.
Iron	0.001	0.01
Cobalt	<0.00002	n.d.
Nickel	balance	--
Total Other Elements	<0.001	--

Scott Volumeter Method

## Typical Physical Characteristics

**Fisher Sub-Sieve Size:** 2.6 - 3.3 microns  
 (Air Permeability Method)

**Bulk Density:** 0.75 - 0.95 g/cm<sup>3</sup>

**Typical Specific Surface Area:** 0.6 m<sup>2</sup>/g (BET)



This product is part of a complete range of Inco Special Nickel Products. The range includes: fine and extra fine nickel powders of many different morphologies, nickel coated graphite particles, INCOFOAM™ high porosity nickel foam, nickel oxides and nickel flakes.