



## Technical Data Sheet

### ACS Material Nickel Nanoparticles

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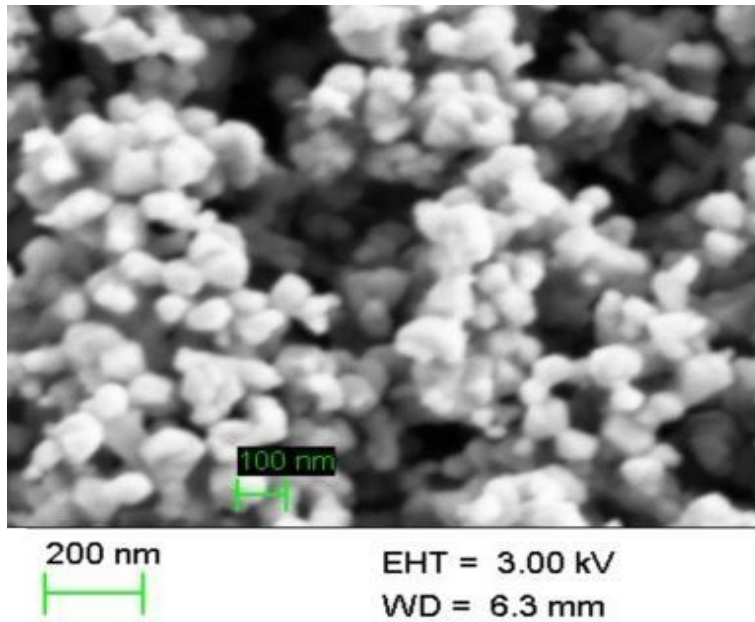
## 1. Physical and Chemical Properties

|  |                     |
|--|---------------------|
| <b>Color:</b>                                | Black               |
| <b>Crystal structure:</b>                    | Face-centered Cubic |
| <b>BET surface area (m<sup>2</sup>/g):</b>   | 27.8                |
| <b>Average Particle Size (nm):</b>           | 100                 |
| <b>Purity (%):</b>                           | ≥ 99.5              |
| <b>Bulk density (g/cm<sup>3</sup>):</b>      | 1.3                 |
| <b>Theoretic density (g/cm<sup>3</sup>):</b> | 8.9                 |

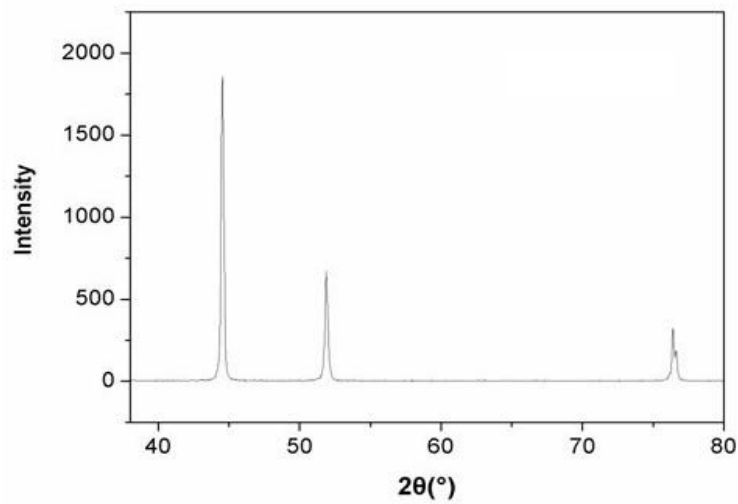
### Specifications (Typical Chemical Analysis)

| Chemical Composition                                |           |         |
|---|-----------|---------|
| Element   | Wert %    |         |
| <b>Maximum Concentration of Element</b>             | <b>Ni</b> | >99.5   |
|   | <b>As</b> | <0.001  |
|   | <b>As</b> | <0.001  |
|   | <b>Cd</b> | <0.001  |
|   | <b>Hg</b> | <0.001  |
|   | <b>Pd</b> | <0.001  |
|   | <b>Co</b> | <0.002  |
|   | <b>Bi</b> | <0.0005 |
|   | <b>Sn</b> | <0.001  |
|   | <b>Sb</b> | <0.001  |
|   | <b>Mg</b> | <0.001  |
|   | <b>P</b>  | <0.001  |
|   | <b>Si</b> | <0.001  |
|   | <b>O</b>  | <0.27   |
| <b>Average Particle Size dvs (nm)</b>               | 100       |         |
| <b>Fisher particle size</b>                         |           |         |
| <b>Loose Density pas (g/cm<sup>3</sup>) F.s.s.s</b> | 1.3       |         |
| <b>Tap Density (g/cm<sup>3</sup>)</b>               | 2.82      |         |

## 2. Structure Features



Typical SEM Image of ACS Material Nickel Nanoparticles



Typical XRD Analysis of ACS Material Nickel Nanoparticles

## 3. Application Fields

- 1) High-performance electrode material
- 2) Efficient catalysts
- 3) Magnetic fluid
- 4) Conductive paste

- 5) Sintering additives
- 6) Non-metallic conductive coatings
- 7) Magnetic recording
- 8) Combustion efficiency
- 9) Fuel Cell
- 10) Lubricant additives

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