

NOVAMET

4SP Nickel Powder

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4SP Nickel Powder is a high purity smooth spherical powder made from the thermal decomposition of nickel carbonyl. It is available screened -250 and -400 mesh and also in three air classified fractions: -10 microns, -20 microns and -20 + 10 microns.

Applications

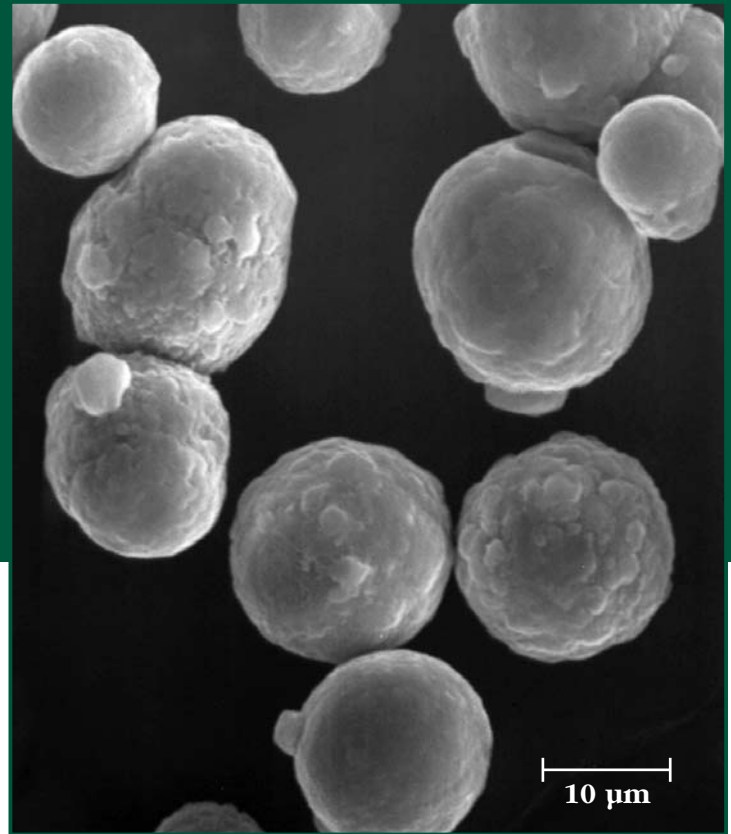
4SP Nickel Powder is ideal for making Powder Metal parts where high sintered density and controlled shrinkage are important. Type 4SP -10 is the preferred choice for the Metal Injection Molding industry. Other 4SP applications include: welding electrodes, sintered magnets and Ag Ni PM parts.

The Advantages of using 4SP-10 in Metal Injection Molding (MIM)

4SP-10 mirrors the size and shape of the carbonyl iron powder used in MIM and therefore allows for its uniform distribution throughout the alloy composition. Other advantages of using 4SP-10 for MIM applications include:

- Narrow particle size distribution.
- Tap density over 50% of theoretical.
- Spherical powder shape for maximum packing density.
- Low surface area.
- Does not contain agglomerates.
- Custom size distributions are available.

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Typical Properties of 4SP Nickel Powder

Typical Properties

Nickel	Oxygen	Carbon	Iron	Sulfur
99.9%	500 ppm	500 ppm	<20 ppm	2 ppm

Size Distribution (Microtrac) microns

Type	d10	d50	d90
4SP-100+10	9	17	49
4SP-250+10	8	15	36
4SP-400	5.3	11	29
4SP-20+10	6.1	10	18
4SP-20	3.6	8	13
4SP-10	3.7	7	10

Tap Density

5.2 g/cm³

Packaging

Size	Weight
1 gal / 4 liter can	11 lb / 5 kg
5 gal / 20 liter pail	55 lb / 25 kg
15 gal / 60 liter drum	220 lb / 100 kg

Note: All containers are lined with a polyurethane bag.

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