



Commercial Powder

Metal Group – **NICKEL**
Catalogue No. – **SST-N5001**



Description:

A commercially pure Nickel powder with particle size distribution especially tailored for the cold spray process. Suits applications that require high hardness combined with good corrosion protection and wear resistance. The cold spray coating is characterized by very high hardness, high density, and good bonding strength.

Specifications:

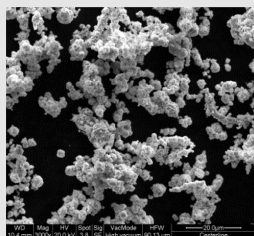
Material Properties

Composition:	Ni 99.7% Min.
Particle Size:	-45 to +5 µm
Characteristics:	Irregular shaped particles for maximum velocity.

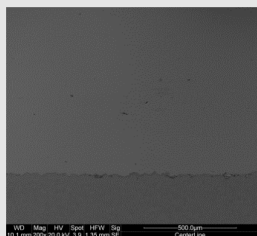
Typical Coating Properties

	<u>Series P</u>	<u>Series EP</u>
Bond Strength:	> 1700 psi	> 5500 psi
Deposition Efficiency:	Up to 35%	Up to 70%
Deposition Rate:	Up to 4 g/min	Up to 35 g/min
Hardness (Brinell):	195 – 205	240 – 260
Density:	> 99%	> 99%

Typical Micrograph



SST-N5001 Powder



SST-N5001 Coating on Steel
(Series EP)

Ordering Information

Catalogue Number:	SST-N5001
Standard Packaging:	400 ml or 1 gallon sized container
Selling Unit:	Pound
Material Certification:	Available upon request

Recommended Spray Parameters

(When utilizing CenterLine Cold Spray equipment. Recommendations may not apply when making use of non-CenterLine equipment)

	<u>Series P</u>	<u>Series EP</u>
Temperature:	450– 550°C	450 – 550°C
Pressure:	100 – 250 psi	100 – 500 psi
Powder Pre-heating*:	N/A	≤ 500°C
Standoff Distance:	10 – 25 mm	10 – 40 mm
Gas:	Compressed air or Nitrogen	
Feed Rate (gram/min.):	12 – 18	18 – 55
Gun Traverse Speed:	10 – 250 mm/s depending on process settings and target coating thickness	
Surface Preparation:	SST-G0002 commercial blast	
Spray Nozzle:	UltiLife™	

To discuss your Cold Spray Application(s) or for more information about powders and blends, please contact your CenterLine SST representative or visit our website at www.supersonicspray.com

* Notice for Powder Heater Use

Due to the specific material characteristics of this powder, equipment settings that deviate from the **Recommended Spray Parameters** listed above may result in clogging the powder heater. These parameters are based on 10 minutes of continuous spray time. For applications that require continuous spray times exceeding 10 minutes, please consult with CenterLine to receive assistance in optimizing spray parameters. Note that the SST Spray Machine and Gun User's Manuals also contain information on proper settings and operating parameters.