SST-N5001

PRACTICAL COLD SPRAY COATINGS

TECHNICAL DATA SHEET

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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

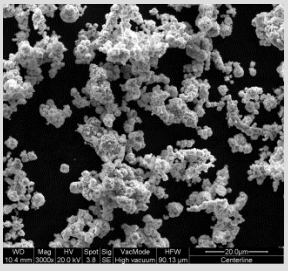
Composition:	**Ni 99.7% Min.**
Particle Size:	**-45 to +5 µm**
Characteristics:	**Irregular shaped particles for maximum velocity**

Typical Coating Properties

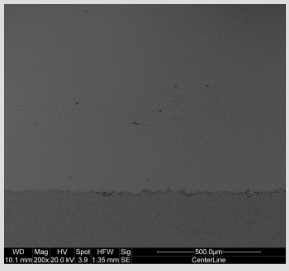
	Series P/PX	Series EP/EPX
Bond Strength*:	**> 1300 psi**	**> 1900 psi**
Hardness (Brinell):	**195 – 205**	**240 – 260**
Density:	**> 99%**	**> 99%**
Deposition Efficiency:	**Up to 40%**	**Up to 60%**
Deposition Rate:	**Up to 10 g/min**	**Up to 50 g/min**

Higher bond strengths can be achieved. Please consult with CenterLine to receive assistance in optimizing the spray parameters.

Typical Micrograph



SST-N5001 Powder



SST-N5001 Coating on Steel (Series EP)

Spray Parameter Ranges

Spray parameters only apply to CenterLine Cold Spray equipment.

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

Ordering

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

To discuss your Cold Spray Application(s), including the optimization of spray parameters for higher coating bond strengths, or for more information about powders and blends, please contact your CenterLine SST representative or visit our website at www.supersonicspray.com.

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