



Commercial Powder

Metal Group – **NICKEL**
Catalogue No. – **SST-N0056**



Description:

A general nickel-based mixture of nickel, aluminum, zinc, and alumina, with good coating build-up speed and smooth as-sprayed surface finish. The blend particle size distribution is especially tailored for the cold spray process with applications suitable for cast iron component repair. The coating presents full density, excellent bonding strength, and excellent machinability.

Specifications:

Material Properties

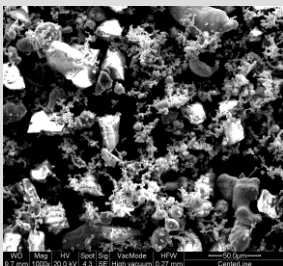
Composition:	Ni 99.7% Min., Al 99.5% Min., Al₂O₃ 92% Min., Zn 99.7% Min.	
Particle Size:	-45 to +5 µm	
Characteristics:	Irregular shaped particles for maximum velocity	

Typical Coating Properties

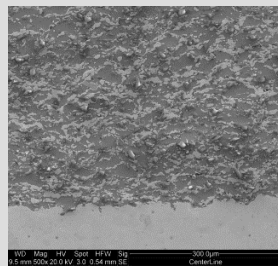
	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Bond Strength*:	> 5000 psi	> 6000 psi
Hardness (Brinell):	76 – 79	90 – 98
Density:	> 99.5%	> 99.5%
Deposition Efficiency:	Up to 20%	Up to 30%
Deposition Rate:	Up to 5 g/min	Up to 25 g/min

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

Typical Micrograph



SST-N0056 Powder



SST-N0056 Coating on Steel (Series EP)

Spray Parameter Ranges

Spray parameters only apply to CenterLine Cold Spray equipment.

	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Temperature:	350 – 550°C	350 – 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-N0056
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.