



Commercial Powder

Metal Group – **NICKEL**
Catalogue No. – **SST-N0066**



Description:

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

Specifications:

Material Properties

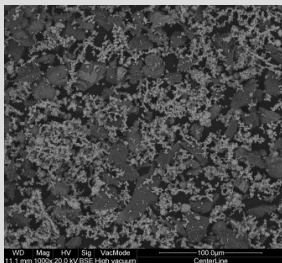
Composition:	Ni 99.7% Min., Al 99.5% Min., Al₂O₃ 92% Min.	
Particle Size:	-45 to +5 µm	
Characteristics:	Irregular shaped particles for maximum velocity	

Typical Coating Properties

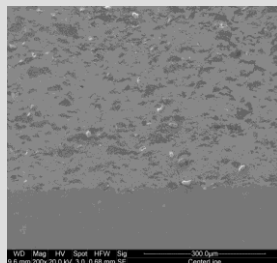
	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Bond Strength*:	> 2700 psi	> 3700 psi
Hardness (Rockwell B):	72 – 75	86 – 90
Density:	> 99.5%	> 99.5%
Deposition Efficiency:	Up to 35%	Up to 50%
Deposition Rate:	Up to 9 g/min	Up to 45 g/min

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

Typical Micrograph



SST-N0066 Powder



SST-N0066 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:	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-N0066
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.