



Commercial Powder

Metal Group – **NICKEL**
Catalogue No. – **SST-N0036**



Description:

A general nickel-ceramic blend of nickel and alumina, with particle size distribution especially tailored for the cold spray process. The deposition is characterized by high hardness and is suitable for applications that require a high hardness coating with both good corrosion and wear resistance. The coating presents full density and good bonding strength.

Specifications:

Material Properties

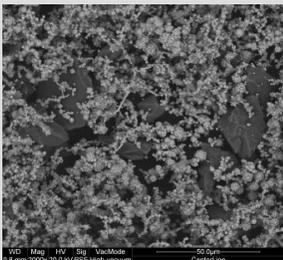
Composition:	Ni 99.7% Min., Al₂O₃ 92% Min.	
Particle Size:	-45 to +5 µm	
Characteristics:	Irregular shaped particles for maximum velocity	

Typical Coating Properties

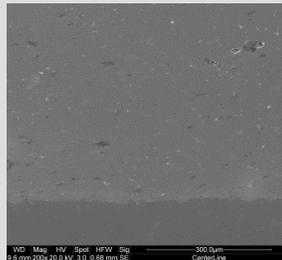
	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Bond Strength*:	> 2200 psi	> 3000 psi
Hardness (Rockwell B):	95 – 98	100 – 106
Density:	> 99.5%	> 99.5%
Deposition Efficiency:	Up to 35%	Up to 50%
Deposition Rate:	Up to 9 g/min	Up to 40 g/min

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

Typical Micrograph



SST-N0036 Powder



SST-N0036 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 – 200 mm/s depending on process settings and target coating thickness	
Surface Preparation:	SST-G0002 commercial blast	
Spray Nozzle:	UltiLife™	

Ordering

Catalogue Number:	SST-N0036
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.