



Commercial Powder

Metal Group – **ALUMINUM**
Catalogue No. – **SST-A0082**



Description:

A general purpose aluminum-based blend of aluminum and high purity alumina particles with good deposition growth rate, smooth surface and high bonding strength on Mg and Al alloys. The blend particle size distribution is specially tailored for the cold spray process, suitable for repairing a variety of aluminum and magnesium parts. The coating presents full density, excellent bonding strength, excellent machinability and excellent corrosion resistance.

Specifications:

Material Properties

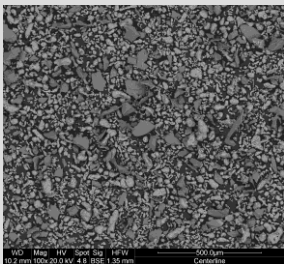
Composition:	Al 99.5% Min., Al ₂ O ₃ 99.0% Min.	
Particle Size:	-75 to +5 µm	
Characteristics:	Irregular shaped particles for maximum velocity	

Typical Coating Properties

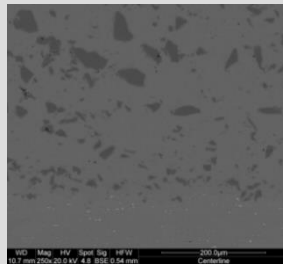
	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Bond Strength*:	> 6000 psi	> 7500 psi
Hardness (Brinell):	57 – 62	60 – 63
Density:	> 99.5%	> 99.5%
Deposition Efficiency:	Up to 20%	Up to 40%
Deposition Rate:	Up to 5 g/min	Up to 30 g/min

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

Typical Micrograph



SST-A0082 Powder



SST-A0082 Coating on Al6061 (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:	300 – 500°C	300 – 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	12 – 80
Gun Traverse Speed:	10 – 500 mm/s depending on process settings and target coating thickness	
Surface Preparation:	SST-G0002 commercial blast	
Spray Nozzle:	UltiLife™	

Ordering

Catalogue Number:	SST-A0082
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.