



Commercial Powder

Metal Group – **ALUMINUM**
Catalogue No. – **SST-A5001**



Description:

Pure aluminum powder with special particle size distribution tailored for cold spray process with general application in corrosion protection. Cold spray coating presents high density, excellent bonding strength on Al6061 substrate, and good machinability.

Specifications:

Material Properties

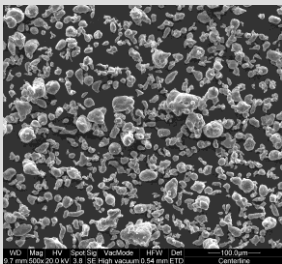
Composition:	Al 99.5% Min.
Particle Size:	-45 to +5 µm
Characteristics:	Irregular shaped particles for maximum velocity

Typical Coating Properties

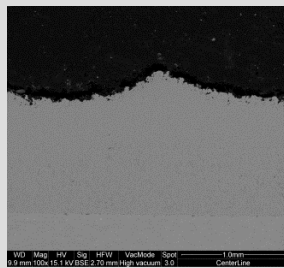
	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Bond Strength*:	> 1500 psi	> 2000 psi
Hardness (Brinell):	34 – 37	37 – 44
Density:	> 99%	> 99%
Deposition Efficiency:	Up to 45%	Up to 70%
Deposition Rate:	Up to 10 g/min	Up to 55 g/min

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

Typical Micrograph



SST-A5001 Powder



SST-A5001 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:	400 – 500°C	400 – 500°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):	4 – 25	4 – 80
Gun Traverse Speed:	10 – 500 mm/s depending on process settings and target coating thickness	
Surface Preparation:	SST-G0002 commercial blast or grease free as-machined surface	
Spray Nozzle:	UltiFlow™	

Ordering

Catalogue Number:	SST-A5001
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.