



Commercial Powder

Metal Group – **ALUMINUM**
Catalogue No. – **SST-A0079**



Description:

Aluminum alloy blend of Al6061 and alumina particles, with higher deposition build-up speed than Al6061 powder. The blend particle size distribution is specially tailored for the cold spray process, suitable for repairing a variety of aluminum alloy parts and plastic injection molds requiring high bonding strength and base material hardness matching. The coating presents full density, excellent bonding strength on Al6061 substrate and good machinability.

Specifications:

Material Properties

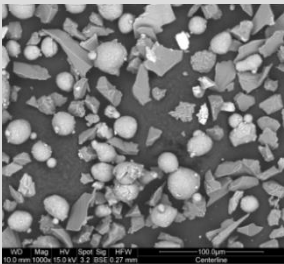
Composition:	Al 99.5% Min., Al ₂ O ₃ 92% Min.	
Particle Size:	-54 to +15 µm	
Characteristics:	Spherical Al6061 mixed with irregular shape of Alumina	

Typical Coating Properties

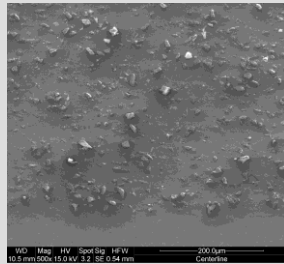
	<u>Series P/PX</u>	<u>Series EP/EPX</u>
Bond Strength*:	> 10000 psi	> 10000 psi
Hardness (Brinell):	105 – 115	105 – 115
Density:	> 99.5%	> 99.5%
Deposition Efficiency:	Up to 10%	Up to 20%
Deposition Rate:	Up to 3 g/min	Up to 15 g/min

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

Typical Micrograph



SST-A0079 Powder



SST-A0079 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:	350 – 550°C	450 – 550°C
Pressure:	100 – 250 psi	150 – 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 – 200 mm/s depending on process settings and target coating thickness	
Surface Preparation:	SST-G0002 commercial blast	
Spray Nozzle:	UltiLife™	

Ordering

Catalogue Number:	SST-A0079
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.