



Commercial Powder

Metal Group – **ALUMINUM**
Catalogue No. – **SST-A0027**



Description:

A general purpose aluminum-based powder mixture containing aluminum, zinc, and alumina, with fast deposition build-up speed. The blend particle size distribution is especially tailored for the cold spray process, and is suitable for repairing a variety of components and freeform fabrication. It can produce very thick and smooth deposition. The coating presents full density, good bonding strength, and excellent machinability.

Specifications:

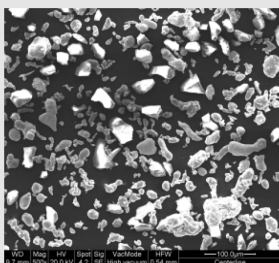
Material Properties

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

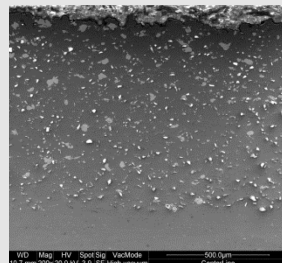
Typical Coating Properties

	<u>Series P</u>	<u>Series EP</u>
Bond Strength:	> 5200 psi	> 7500 psi
Deposition Efficiency:	Up to 36%	Up to 45%
Deposition Rate:	Up to 5 g/min	Up to 37 g/min
Hardness (Brinell):	46 – 50	59 – 62
Density:	> 99.5%	> 99.5%

Typical Micrograph



SST-A0027 Powder



SST-A0027 Coating on Al6061
(Series EP)

Recommended Spray Parameters

(When utilizing CenterLine Cold Spray equipment. Recommendations may not apply when making use of non-CenterLine equipment)

	<u>Series P</u>	<u>Series EP</u>
Temperature:	350 – 500°C	350 – 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 – 20	12 – 85
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-A0027**
Standard Packaging: **400 ml or 1 gallon sized container**
Selling Unit: **Pound**
Material Certification: **Available upon request**

To discuss your Cold Spray Application(s) or for more information about powders and blends, please contact your CenterLine SST representative or visit our website at www.supersonicspray.com.