



Commercial Powder

Metal Group – **ALUMINUM**
Catalogue No. – **SST-A5006**



Description:

Aluminum Silicon Alloy powder (Al4047, SST Catalog No. SST-A5006) with special particle size distribution for cold spray processes with general applications in salvage and restoration of aluminum and magnesium components. The cold spray coating presents high density, excellent bonding strength on magnesium alloy substrate, and good machinability.

Specifications:

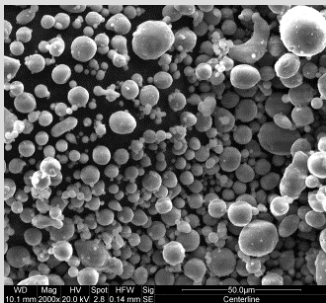
Material Properties

Composition: **Al-12Si 99% Min.**
Particle Size: **-45 to +5 µm**
Characteristics: **Spherical particles**

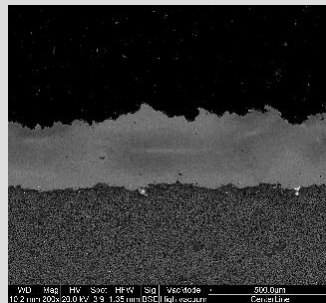
Typical Coating Properties

Bond Strength*: **> 10000 psi**
Hardness (Brinell): **89 – 97**
Density: **> 99%**
Deposition Efficiency: **Up to 4%**
Deposition Rate: **Up to 2 g/min**

Typical Micrograph



SST-A5006 Powder



SST-A5006 Coating on Al6061
(Series EP)

Spray Parameter Ranges

Spray parameters only apply to CenterLine Cold Spray equipment.

Series EP/EPX

Temperature: **450 – 500°C**
Pressure: **450 – 500 psi**
Standoff Distance: **10 – 40 mm**
Gas: **Nitrogen**
Feed Rate (gram/min): **12 – 50**
Gun Traverse Speed: **5 – 100 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-A5006**
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.