

Aluminum Silicon Spherical Powder Theoretical Properties (Metal Profile)

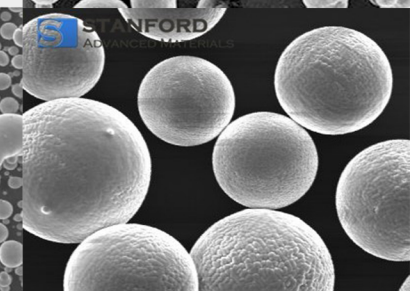
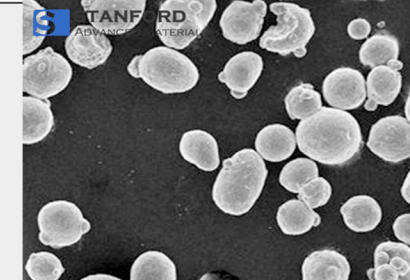
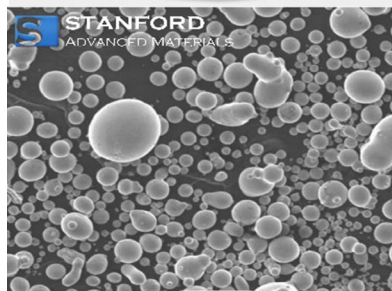
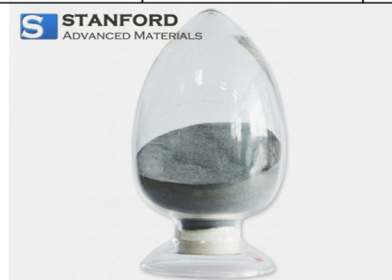
Grade	AlSi12	AlSi10Mg	AlSi7Mg	AlSi5 (4043)	AlSi9Cu3
Particle Size	15-53, 45-150µm, or customized				
Theoretical Density (g/cm ³)	2.66	2.67	2.68	2.69	2.8
Tensile Strength (MPa)	296	460±20	360	145	270
Yield Strength (MPa)	145	240±10	210	70	160
Melting Point (°C)	577	573-585	520-540	574-632	530
Brinell Hardness (HB)	80	97±13	45-60	39	91
Thermal Conductivity (W/mk)	121	130-150	155	163	100
Chemical Composition (%)	Al: Bal Si: 11.00-13.00 Mn: ≤0.1 Zn: ≤0.2 Cu: ≤0.3 Mg: ≤0.1 Pb: ≤0.02 Sn: ≤0.02 O: <0.05 Other ≤0.02	Al: Bal Si: 10-11 Mg: 0.4-0.45 Fe: 0.14-0.55 Cu: <0.05 Mn: <0.01-0.45 Others: <0.01 O: ≤0.05	Al: Bal Si: 6.5-7.5 Mg: 0.3-0.45 Mn: ≤0.1 Zn: ≤0.1 Cu: ≤0.50 Ti: ≤0.20 Fe: ≤0.20 O: ≤0.05	Al: Bal. Si: 4~6 Fe: <0.5 Cu: <0.02 Zn: <0.02 Mn: <0.02 Mg: <0.02 Ni: <0.02 Other: <0.05	Al: Bal Si: 8-11 Fe: 1.3 Cu: 2-4 Mn: 0.55 Mg: 0.05-0.55 Cr: 0.15 Ni: 0.55 Zn: 1.2 Pb: 0.35 Sn: 0.25 Ti: 0.25

Feature

Good fluidity
Excellent sphericity
Uniform Particle Size Distribution

Main Application

3D Printing
Aerospace
Casting Powder
Powder Metallurgy
Vehicle Construction



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