

AlSi10Mg-0403 powder for additive manufacturing

Process specification

Powder description	A
Layer thickness	25
Laser power	400
Additive manufacturing system	A 250

Material description

A 10Mg-0403 is a high purity AlSi10Mg alloy powder with a maximum of 10% Si and 0.04% Cu. It is a spherical powder with a narrow particle size distribution. The powder is produced by a gas atomization process and is suitable for laser powder bed fusion (LPBF) and electron beam powder bed fusion (EB-PBF) processes.

Detailed description of the material properties and characteristics can be found in the technical data sheet (TDS) for this material.

Material properties

Yield strength (ASTM F2924) (MPa)

Tensile strength (ASTM F2924) (MPa)

Elongation at break (%)

Modulus of elasticity (GPa)

Thermal conductivity (W/mK)

Thermal expansion (1/K)

Applications

A 10Mg-0403 is used in:

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C 10Mg-0403 is used in:

Generic data - wrought material

Density	2.68 /
Thermal conductivity	130 / 190 /
Melting range	570 C 590 C
Coefficient of thermal expansion (1/K)	20 / 21 /

1. Yield strength (ASTM F2924) (MPa)

2. Tensile strength (ASTM F2924) (MPa)

3. Elongation at break (%)

4. Modulus of elasticity (GPa)

5. Thermal conductivity (W/mK)

