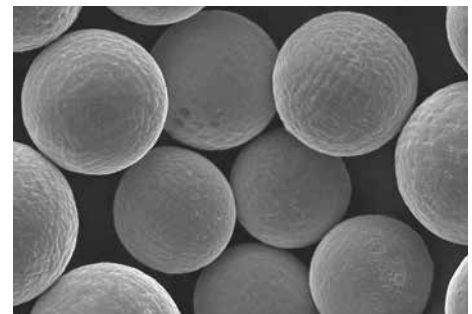
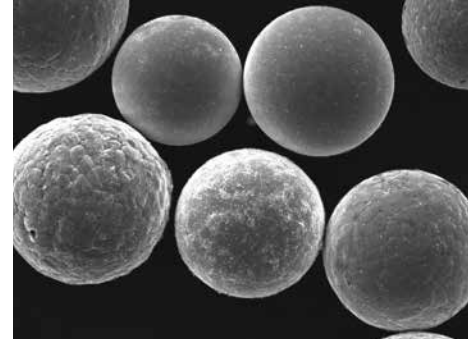


HIGH PERFORMANCE PARTS START WITH HIGH PERFORMANCE POWDER

From 6K's UniMelt® process, the world's only microwave plasma production system comes the highest performing and most versatile set of powders. Stainless steel additive manufacturing powder is used across a wide variety of applications and markets including architecture and construction, automotive and transportation, industrial manufacturing, medical devices, laboratory equipment, and oil and gas. At 6K Additive we have a growing number of stainless steel AM powders available starting with 316L to help meet the needs of these growing applications.

6K Additive's stainless steel highly spherical powders deliver excellent properties that allow designers to build boldly using additive manufacturing. SS316L produces additive manufactured parts that show a high level of corrosion resistance, toughness and ductility as well as a high resistance to acids.

SS316L is available in a variety of sizes, the representative properties are shown below for a fine cut.



NOMINAL CHEMISTRY	
Iron	Balance
Chromium	16.0-18.0%
Nickel	10.0-14.0%
Molybdenum	2.00-3.00%
Manganese (Max)	2.00%
Silicon (Max)	1.00%
Carbon (Max)	0.03%
Phosphorous (Max)	0.045%
Sulfur (Max)	0.03%

PHYSICAL PROPERTIES (TYPICAL)	
	15-45µM
Apparent Density	4.5 g/cm ³
Tap Density	4.9 g/cm ³
Hall Flow	22 s/50g

TENSILE PROPERTIES - SS316L					
	Powder	YS (MPa)	UTS (MPa)	EL (%)	RA (%)
XY	6K*	313	602	51	66
	ASTM F3184*	205	515	30	30
Z	6K*	307	573	61	66
	ASTM F3184*	205	515	30	30

* Annealed

6K Premium Powders

- Ultra clean
- No satellites
- High sphericity
- Free flowing
- High apparent density
- Low porosity
- Exceptional lot to lot consistency
- Conforms to AMS7037
- Conforms to ASTM F3184



HIGH DENSITY POWDER

Unlike competitive technologies, 6K's process delivers highly dense, highly spherical powders without satellites, as shown in microCT of the particle.



DERIVED FROM SUSTAINABLE SOURCES

At 6K our powders are produced from sustainable sources including used powders and machine turnings. We leverage these input streams as feedstock for the UniMelt process, essentially turning scrap into high value AM powder. This process enables your organization to get value back from your past powder investment by participating in 6K Additive's powder buy-back program. We will buy your used powder, provide you a credit towards new premium powder for a wide variety of applications.



HIGH UNIMELT YIELD AND TUNABLE PSD

6K's UniMelt process can deliver the highest yield in the industry for your target PSD. With our unique microwave plasma technology our production run can be tailored for any additive manufacturing (AM) platform including powder bed fusion, EBM, Binder Jet, direct energy deposition and cold spray plus PM processes like MIM and HIP.

With 6K's UniMelt breakthrough technology we have the capability of producing almost limitless material combinations, allowing you to design with infinite possibilities for your application.



SS316L Printed Part

Printed part made from 6K Additive plasma spheroidized powder at Casttheon on a Concept Laser M2 printer.

Key Properties

- Superior corrosion resistance
- High resistance to acids
- High oxidation resistance
- Prolonged performance in elevated temperatures

Industries

- Architecture
- Automotive
- Industrial
- Medical
- Oil & Gas

6K Additive's production team has extensive experience in powder production, alloys and metal reclamation. Our 80,000 sq. ft. facility is ISO9001 certified and AS9100 certification is in process.

6K CORPORATE HEADQUARTERS

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