



TI64GD23 POWDER

15-53 Microns

SPECIFICATION SHEET

Product Description

Ti64 is an alpha-beta titanium alloy with high specific strength and stiffness. It is an ideal material for high-performance applications, with a melting temperature range of 2,800 – 3,000 °F (1,500 – 1,660 °C). Amaero's titanium powder is manufactured in the U.S. using EIGA Premium technology.

Chemistry

Element	Percentage	Element	Percentage
Ti	Balance	O	0.13 max
Al	5.50 – 6.50	V	3.50 – 4.50
C	0.08 max	Y	0.005 max
H	0.012 max	Others (each)	0.10 max
Fe	0.25 max	Others (total)	0.40 max
N	0.05 max		

Certification

Powder shipments shall be accompanied with a Certificate of Analysis that includes the following information:

- Supplier's Name
- Customer P.O. Number
- Supplier's Identification or Part Number
- Powder Lot
- Weight of Powder
- Chemical Composition
- Particle Size Distribution
- Apparent Density

Powder Size Distribution

Size	Value	Method
53 µm	10.0% max	ASTM B214
15 µm	10.0% max	ASTM B822
D10	Report only	ASTM B822
D50	Report only	ASTM B822
D90	Report only	ASTM B822

Tap Density

Tap Density to be performed to ASTM B527.

Visual Appearance

Powder shall be examined under Scanning Electron Microscope (SEM) for presence of exogenous material.

Packaging

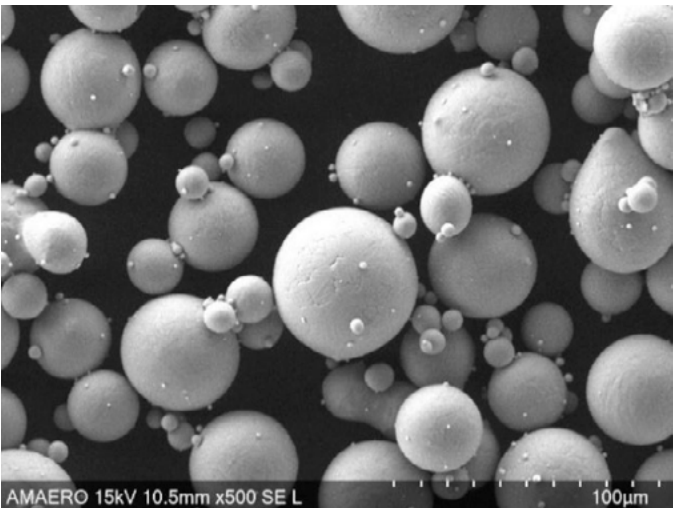
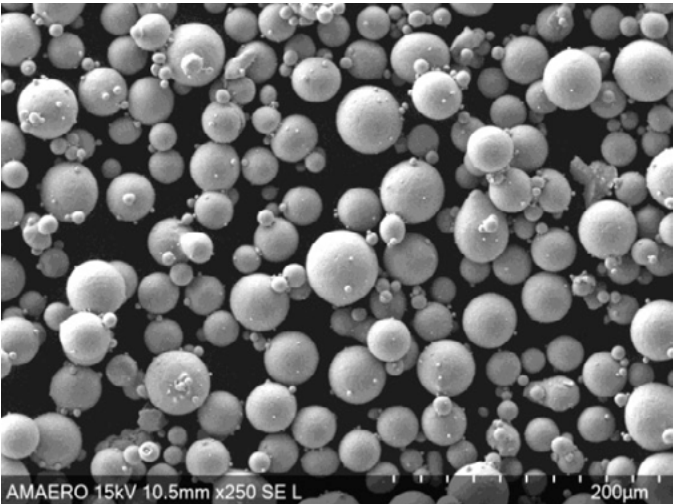
Powder shall be packaged in sealed metal or plastic containers suitable for transportation, storage and contamination prevention. Labels on container shall include the following information:

- Powder Lot Identification
- Powder Weight
- Nominal Size Range
- GHS Label
- Supplier's Identification or Part Number

Powder Details

Alloy	Grade 23 Ti-6Al-4V conforming to ASTM F3001-14
Condition	Virgin
Particle Size Distribution	15-53 μm per AMS 7025
Typical Powder Oxygen	0.08 wt%
Typical Powder Nitrogen	0.01 wt%

SEM Images



Heat Treatment

800C, 2 hours in vacuum

Material Properties

Consolidated Oxygen: 0.13 wt%

Consolidated Nitrogen: 0.036 wt%

Room Temperature Data (Z-direction):

- Yield Strength: 152.8 ksi (1054 MPa)
- Ultimate Tensile Strength: 162.3 ksi (1119 MPa)
- Elongation: 13.5%
- Reduction of Area: 41.6%
- Hardness: 37.3 Rc

