

Technical Data Sheet

ATI C103™ Spherical Powder

Revision Date: 10/14/2022



General Information

ATI C103™ is used in aerospace and defense propulsion applications requiring strength at sustained high operating temperatures. ATI C103™ is now offered in spherical powder for use with electron beam, laser powder bed, direct energy deposition and cold spray technologies for additive manufacturing of complex geometries.

Product Forms

ATI C103™ Spherical Powder is offered in fine and coarse sizes. Fine is defined as nominal 15-50 µm with coarse being defined as 50-180 µm. Other particle sizes are offered by request.

Additional C103™ product forms are available such as bar, sheet, plate, etc. covered under a different product data sheet.

Typical Composition

	Coarse	Fine
Element	Weight %	Weight %
Titanium	0.7 - 1.3	0.7 - 1.3
Hafnium	9 - 11	9 - 11
Zirconium	<0.7	<0.7
Tungsten	<0.5	<0.5
Tantalum	<0.5	<0.5
Oxygen	<0.0225	<0.0325
Nitrogen	<0.01	<0.01
Carbon	<0.015	<0.015
Hydrogen	<0.0015	<0.0015
Niobium	Balance	Balance

Specifications

ATI C103™ Spherical Powder is made from ingots that meet ASTM B652.

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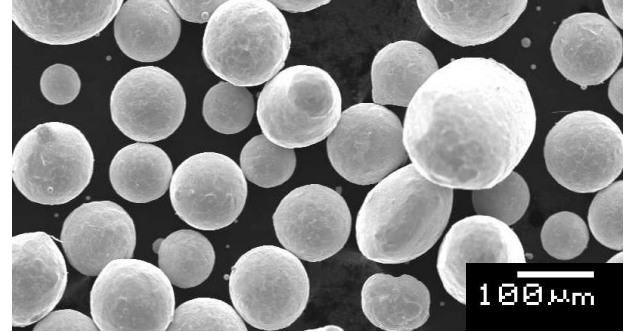
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Physical Properties

Property	Coarse	Fine
Nominal PSD (µm)	50-180	15-50
D10 (µm)	-	25-35
D50 (µm)	-	35-45
D90 (µm)	-	45-55
-325M (%)	<5	-
+80M (%)	<5	-
Hall Flow (sec/50g)	<15	Does Not Flow
Carney Flow (sec/50g)	-	<10
For Information Only, ATI Does Not Certify to The Values Below		
Apparent Density (g/cm ³)	~5.2	~4.8



Packaging and Order Size

Powder is packaged in either 3.6L or 6L Curtec wide neck drums depending on order size. Each container holds a maximum of 25 lbs or 40 lbs net weight of powder, respectively. Other containers are available upon request depending on order quantity and availability.

Used Powder

ATI now offering to accept used metal powders, submit request with online contact form to begin process.

Handling

C103™ Spherical Powder is considered hazardous, see SDS for more details.