Hafnium Powder

INTRODUCTION

ATI produces hafnium powder as per the general capabilities mentioned previously. The purities available are suited for either commercial or nuclear applications. Nuclear grade can be used to produce rate-control parts and various apparatus in nuclear electrical power generators as well as applications in nuclear fuel processing. Commercial grade forms a basis for various chemicals, sputtering targets, pyrotechnical applications, plasma spray coatings, and alloy additions. The table below gives a TYPICAL chemical analysis based upon nominal mesh sizes stated. Please refer to general powder capabilities and testing.

All elements are shown in ppm except zirconium. Other screen sizes are available on request.

TYPICAL COMPOSITION

Table 1. Typical Chemical Analysis (Commercial)

Element	Nominal -100 x down	Nominal -325 x down
Carbon	< 150	< 150
Nitrogen	< 250	< 250
Hydrogen	< 250	< 250
Oxygen	< 2500	< 3500
Aluminum	< 100	< 100
Niobium	< 100	< 100
Copper	< 100	< 100
Iron	< 250	< 250
Tantalum	< 200	< 200
Tungsten	< 150	< 150
Zirconium	< 4.5%	< 4.5%
Hafnium	Balance	Balance

NOMINAL HAFNIUM POWDER TECHNICAL DATA

All elements are shown in ppm except zirconium. Other screen sizes are available on request.

Table 2. Typical Sieve Analysis

Nominal Mesh	20 Mesh Sieve	40 Mesh Sieve	60 Mesh Sieve	80 Mesh Sieve	100 Mesh Sieve	140 Mesh Sieve	200 Mesh Sieve	270 Mesh Sieve	325 Mesh Sieve	Pan
-lOOXdown					< 9	28	29	18	9	10
-325Xdown									< 9	> 91

Table 3. Density (g/cc)

Nominal Manufactured Mesh	Tap Density (for info only)
-lOOXdown	6.9
-325Xdown	5.3

Allegheny Technologies Incorporated
1000 Six PPG Place
Pittsburgh, PA 15222-5479 U.S.A.
www.ATImetals.com