Advanced Material Specialists, Inc.

HA 9106-1

TUNGSTEN (W)

Product Code: 109918
Technical Data Sheet

Revision: # 000
Dated: 06/01/09

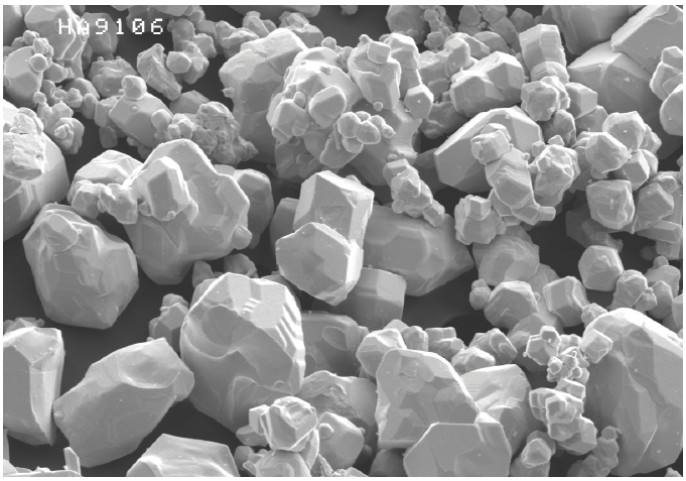

Figure 1: Typical Powder Morphology

1. PHYSICAL PROPERTIES

HA 9106-1 is medium size pure Tungsten powder. Tungsten coatings are used mainly in electrical applications, most notably is incandescent light bulb filaments, and X-ray tubes as targets.

Product Description	**99.9% Pure Tungsten**
Melting Point [°C]	**3,422**
Apparent Density (typical) [g/cm^3] ASTM B212	**7.5 ± 0.5**
Hall Flow (typical) [sec/50g] ASTM B213	**8.4 ± 0.5**

2. CHEMICAL PROPERTIES

2.1. Typical Chemical Analysis

Element	Weight Percent
Tungsten [W]	Balance
Total Others	< 0.50

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3. POWDER MORPHOLOGY AND PARTICLE SIZE DISTRIBUTION

3.1. Powder Morphology

3.1.1. Powder has a roundish, blocky shape as produced by agglomeration, sintering, and crushing or milling processes.

3.1.2. Typical Powder Morphology using SEM is shown in Figure 1.

3.2. Particle Size Distribution

3.2.1. The typical powder size range measured with Tyler according to ASTM B214 is -200+325 mesh

3.2.2. Table 1 shows the typical particle size distribution measured with Microtrac according to ASTM B822

Table 1: Typical Microtrac Particle Size Distribution

Percentile	Typical Particle Size		Mean	Average Particle Size
[%]	[μm]			
100	105		D_{10}	25 μm
99	88			
96	74			
92	62		D_{50}	38 μm
82	53			
65	44			
43	37		D_{90}	53 μm
4	26			
1	20			
0	10			