Global Tungsten & Powders offers two standard grades of molybdenum powder with average particle size ranges that are less than six microns. Reduction from oxide to metal powder is accomplished in hydrogen atmosphere with carefully controlled furnace conditions to yield the desired particle size and quality. The Fisher Sub-Sieve Size (FSSS) is the method used for average particle size measurement. After reduction, the molybdenum is sifted to the below specification and blended. Single blend lots of up to 5,000 kilograms are available in the following two standard types:

**Mo380**
- 100 Mesh: 3.3 - 4.3 μm
- 140 Mesh: 4.0 - 5.2 μm
- Bulk Density: 1.0 - 2.2 g/cm³

**Mo460**
- 100 Mesh: 3.3 - 4.3 μm
- 140 Mesh: 4.0 - 5.2 μm
- Bulk Density: 1.0 - 2.2 g/cm³

Mo380 is recommended for sintering parts 2" in diameter or thickness and smaller.

Mo460 is recommended for sintering parts greater than 2" in diameter or thickness.

### Powder Characteristics

<table>
<thead>
<tr>
<th>Grade</th>
<th>Screened</th>
<th>FSSS Range (μm)</th>
<th>Bulk Density (g/cm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mo380</td>
<td>100 Mesh</td>
<td>3.3 - 4.3</td>
<td>1.0 - 2.2</td>
</tr>
<tr>
<td>Mo460</td>
<td>100 Mesh</td>
<td>4.0 - 5.2</td>
<td>1.0 - 2.2</td>
</tr>
</tbody>
</table>

### Chemical Composition for Mo380 and Mo460

- Mo (%): Min 99.5
- Al (ppm): Max 10
- C** (ppm): Max 50
- Ca (ppm): Max 15
- Cr (ppm): Max 10
- Cu (ppm): Max 10
- Fe (ppm): Max 20
- K* (ppm): Max 30
- Mg (ppm): Max 10
- Mn (ppm): Max 10
- Na* (ppm): Max 15
- Ni (ppm): Max 10
- Pb (ppm): Max 10
- Si (ppm): Max 20
- W (ppm): Max 250
- O₂**(ppm): Max 1500

* By atomic absorption analysis for Na, K
** By carrier gas fusion for C, O₂
All others by optical emission spectroscopy.
Technical Information

In-house Chemical Analysis

To ensure the consistent manufacture of our high quality metal powders, a reliable chemical analysis of the starting material is critical. Regardless of running on high or small scale production, we monitor every production step and counteract even the slightest variations using our state-of-the-art laboratory’s analytical capabilities.

To confirm the high quality of each lot we produce, we provide you with a certificate of analysis for each shipment. As our standard, this includes a chemical analysis as well as average particle size.

Packaging

Our standard packaging is 136 kg powder in 18-gallon steel drums, 50 kg powder in 5-gallon metal pails, or 34 kg powder in 3.5-gallon metal pails.

Certifications

We are certified for ISO9001 (Quality Management System) and ISO17025 (Laboratory Accreditation).

Global Tungsten & Powders

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