



**Focused on today...
A clear vision of tomorrow...**

Atomic Number	74	183.85	75	186.21	Atomic Weight
	W		Re		
Crystal Lattice	2,8,18,3 BCC 2.12.2		2,13,32, HCP 18,8,2		Electron Shells

Tungsten-Rhenium

If it's hot, you need **tungsten-rhenium**. Heater elements, thermocouple wires, furnace shielding and heat sinks are just a few of the most common applications of this material. It's greatest quality is arguably its ductility after exposure to heat.

Unlike pure tungsten, **tungsten-rhenium** (W-Re) maintains a much greater ductility due to its rhenium content. Long-life light bulbs are a prime example of this fact. **Tungsten-rhenium** is also excellent for welding, medical applications and a broad range of other uses in a wide spectrum of industries.

Offered as rod, bar, sheet and plate materials in alloy compositions of W-Re5% and W-Re 25%, our well-known wire products are available in alloy compositions that include W-Re 3%, W-Re 5%, W-Re 20%, 25%, and W-Re26%. We will also custom formulate a **tungsten-rhenium** alloy to your specifications. Powders in composite and spherical alloyed (**SWReP™**) forms are also available in a variety of mesh/sieve sizes.

Here are some selected properties of tungsten-rhenium alloys.

Composition	W 3/5% Re	W 25/26% Re
Density, g/cm³	19.4	19.7
Melting Point, °C	3410/ 3350	3120/ 3130
Ductile Brittle Transition Temperature (as-worked), °C	50-200	(-100)- 25
Electrical Resistivity, μΩ·m at 20°C	0.0914/ 0.1166	0.2749/ 0.2832
Temperature Coefficient of Electrical Resistivity, at 20°C	0.0041/ 0.0032	0.00115
Elastic Modulus in Tension, GPa	403/ 405	430

Rhenium Alloys, Inc. also produces pure **rhenium** and **molybdenum-rhenium** alloys in several forms and compositions. Inquire at sales@rhenium.com for details.

Made in the U.S.A.

P.O. Box 245
1329 Taylor Street
Elyria, Ohio 44036 USA

<http://www.rhenium.com>

Phone: (440) 365-7388
Toll Free: (888) RHENIUM
Fax: (440) 366-9831
E-mail: info@rhenium.com