

Tungsten (Вольфрам)

Tungsten is an metal alloy that is used in many ways.



Tungsten										Lead	
21 Sc 44.956	22 Ti 47.867	23 V 50.942	24 Cr 51.996	25 Mn 54.938	26 Fe 55.845	27 Co 58.933	28 Ni 58.693	29 Cu 63.546	30 Zn 65.38	31 Ga 69.723	32 Ge 72.63
39 Y 88.906	40 Zr 91.224	41 Nb 92.906	42 Mo 95.96	43 Tc [97.91]	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71
71 Lu 174.97	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2
103 Lr [262.11]	104 Rf [265.12]	105 Db [268.13]	106 Sg [271.13]	107 Bh [270]	108 Hs [277.15]	109 Mt [276.15]	110 Ds [281.16]	111 Rg [280.16]	112 Cn [285.17]	113 Uut [284.18]	114 Fl [289.19]

Color

Tungsten is usually silver it can range from;

- ◉ Gray
- ◉ Dark Gray
- ◉ Silver
- ◉ Platinum (Color)



History

- In 1781/1782, the Spanish nobleman(дворянин), Juan José de D'Elhuyar studied metallurgical chemistry with Prof Bergman and gathered information about the work on the mineral tungsten.



*Juan José de Elhuyar
Discoverer of Tungsten*

Luster (блеск)

Tungsten has a shiny (блестящий) metallic luster.



Hardness (Твердость)

Tungsten is a 7.5-8 on the Moh's Hardness Scale.

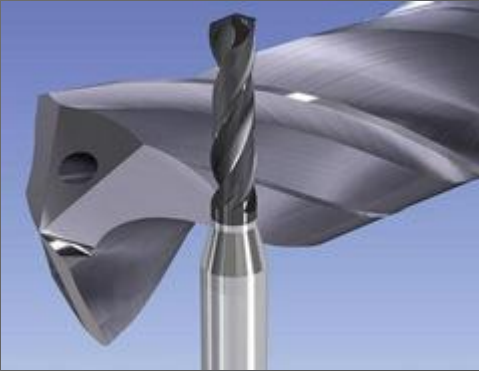
Harder;(тверже)
Corundum(

Softer;(мягче)
Apatite
(апатит)



APPLICATION

Cemented carbide



Alloys



Electronics & electrical industries



Chemical applications

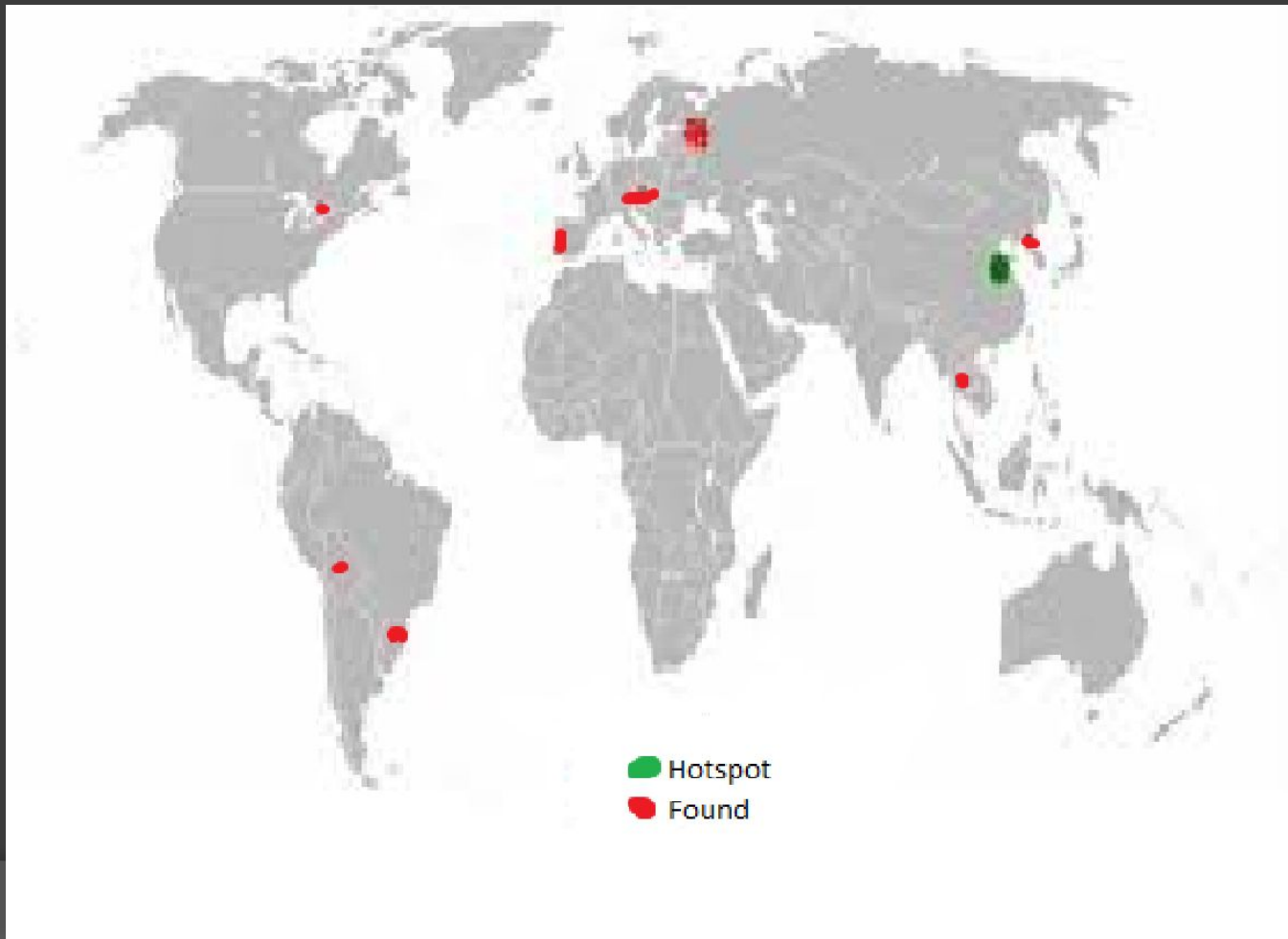


Crystal Shape

Tungsten does not have a crystal shape. it is a metal not a crystal.

Where Tungsten is found

47% of
Tungsten is
found in China



Uses

- Tank armor
- Jewelry
- Anti-tank weapons
- High speed tools
- Car parts



Thank you for attention

