

Terbium - Tb

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Atomic number	65
Atomic mass	158.92534 g.mol ⁻¹
Electronegativity according to Pauling	1.2
Density	8.3 g.cm ⁻³ at 20°C
Melting point	1360 °C
Boiling point	3041 °C
Vanderwaals radius	unknown
Ionic radius	unknown
Isotopes	9
Electronic shell	[Xe] 4f ⁹ 6s ²
Energy of first ionisation	563.5 kJ.mol ⁻¹
Energy of second ionisation	1109.6 kJ.mol ⁻¹
Standard potential	- 2.39 V
Discovered	Carl Mosander in 1843



Terbium

Terbium is a soft, malleable, ductile, silver-gray metal member of the lanthanide group of the [periodic table](#). It is reasonably stable in air, but it is slowly oxidised and it reacts with cold water.

Applications

Terbium is rare and expensive, so it has few commercial uses. Some minor uses are in lasers, semiconductor devices, and phosphorous in colour television tubes. It is also used in solid-state devices, as stabilizer of fuel cells which operate at high temperature.

Terbium in the environment

Terbium is one of the rarer rare-earth elements, although is twice as common in the Earth's crust as [silver](#). It is never found in nature as free element, but is contained in many minerals. The most important ore are monazite, bastnasite and cerite. The main mining areas are China, USA, India, Sri Lanka, Brazil and Australia and reserves for terbium are estimated to be around 300.000 tonnes. World production is 10 tonnes a year.

Health effects of terbium

Terbium has no biological role, it may be mildly toxic by ingestion. Terbium powder and compound are very irritating if they come into contact with the skin and the eyes. Its toxicity has not been investigated in detail.

Environmental effects of terbium

Terbium poses no environmental threat to plants or animals.