



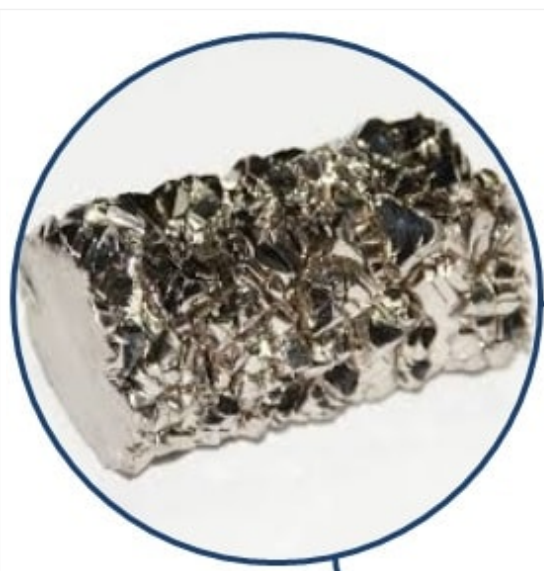
Titanium Chemical Symbol "Ti" Atomic Number 22

Titanium belongs to the chemical elements belonging to group 04 i.e. transition metals. Rutherfordium, zirconium, hafnium are other members of group IV of the periodic table. The periodic table is recognized due to its distribution of groups and periods and sequential arrangement of elements. It also assists us in distinguishing elements with each other.

Occurrence of Titanium: Titanium is known to be the ninth most existing element in the earth and the seventh most existing element. In igneous rocks it is also found in the form of oxides. Titanium also exist in living organisms, sediments and natural occurring species of water. The proportion of titanium in soils is 0.5% till 1.5%.

The common form of titanium that contain minerals are called brookite, rutile, ilmenite, anatase, perovskite and titanite. The rare mineral called Akaogiite is also consists of titanium oxide. Leaving this minerals only ilmenite and rutile have some economic values. The significant titanium bearing ilmenite deposits are only found in Canada, New Zealand, Australia, Africa, China, Norway and even Ukraine too.

Physical Properties of Titanium: Titanium is known because of it's highly strength to weight ratio. Titanium is a strong metal with good strength. Titanium has a low density. However it categorized as a ductile metal.



Titanium
Atomic Number 22
Symbol "Ti"

Titanium Element Infographic

Titanium is a lustrous element. The colour of titanium is metallic while in real. The high melting point of titanium is 1,650 degree centigrades. Titanium is also paramagnetic in nature. Titanium has got a low electrical conductivity as well as thermal conductivity.



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Alloying Behavior of Titanium: Titanium alloys are also known as mixture of other elements with titanium. The alloys of titanium consist of very high tensile strength and as well as toughness too. These alloys are light in weight and are very highly resistant to corrosion.

Some alloys of titanium are P235GH, P265GH steels.

The ability of corrosion helps for aircraft, military applications, bicycles and spacecraft uses. Titanium is called commercially pure element and can be used for dental implants and orthopedic uses. In some applications titanium acts as an alloy with vanadium and aluminum also.

Chemical Properties of Titanium: Similar to magnesium and aluminum, titanium metal and the alloys oxidize very fast when they get in contact with air. Titanium reacts at 1,200 °C with oxygen in air and at 610 °C in the pure oxygen gas. It also forms titanium dioxide.

Read about two other important alloying elements i.e. carbon and chromium

Titanium is very slow to react with air and water in ambient temperatures. Titanium is one of those elements that can be easily burned in the pure nitrogen gas.