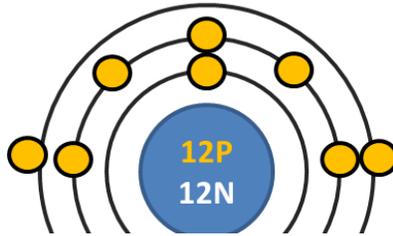


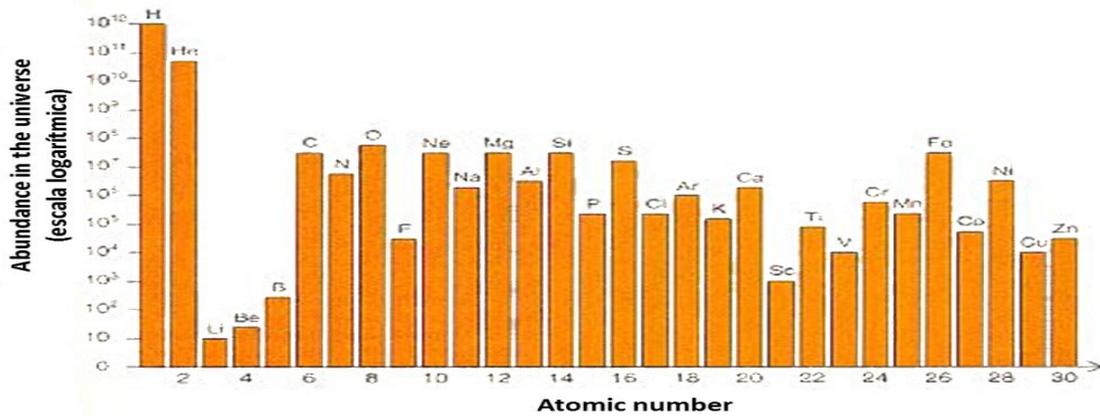
MAGNESIUM



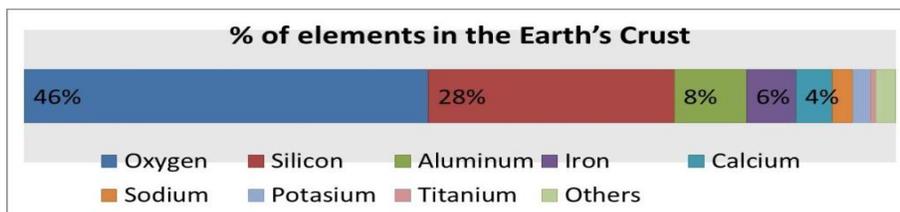
Magnesium is a chemical element with atomic number 12. It is a light alkali metal, medium strong, shiny gray with a density of 1.73 ton per cubic meter with a hexagonal crystal structure making it the lightest metal material that can be used in a practical way (two-thirds of aluminum density and a fourth of iron density)



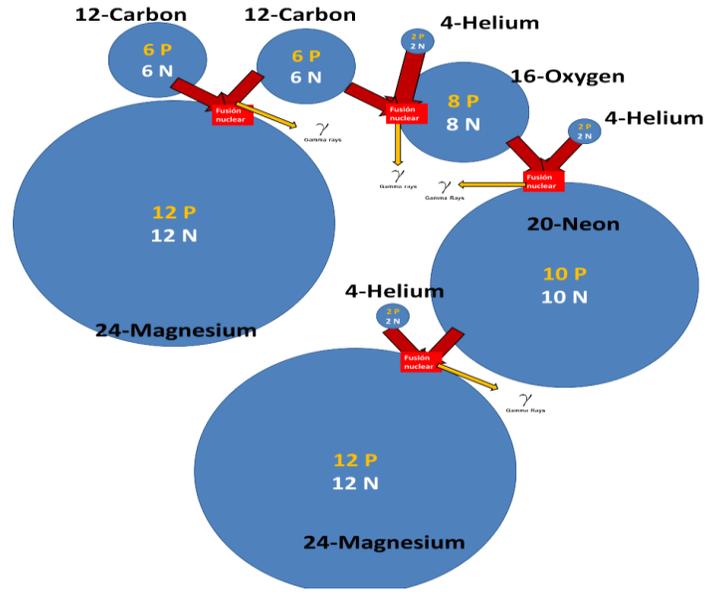
Magnesium is the 9th most abundant element in the universe.



Magnesium is also the 4th most abundant element on Earth (13% of the mass just behind iron, oxygen and silicon) as it represents a large portion of Earth's mantle, and the 8th most abundant in the earth's crust, constituting 2 % of it and the 3rd most abundant dissolved element in the ocean due to its high solubility in water.



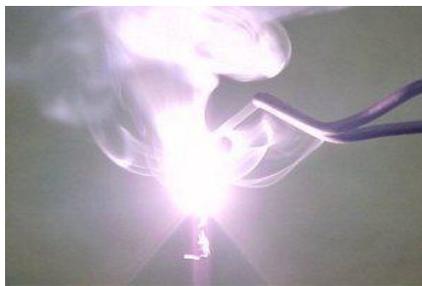
The most abundant isotope is 24-Magnesium (79%) with 12 protons and 12 neutrons. And it is relatively easily formed in supernovae stars (3 times larger than the Sun) during the fusion of helium and neon in the alpha process at temperatures above 600,000 ° K or remotely on nuclear fusion between carbon atoms.



The most common oxidation number of magnesium is +2 because it is highly reactive and is not naturally found in the earth, but as part of various compounds primarily in oxides and salts.

Magnesium is the 7th element in electrical conductivity ($0.226 \cdot 10^6 / \text{cm } \Omega$).

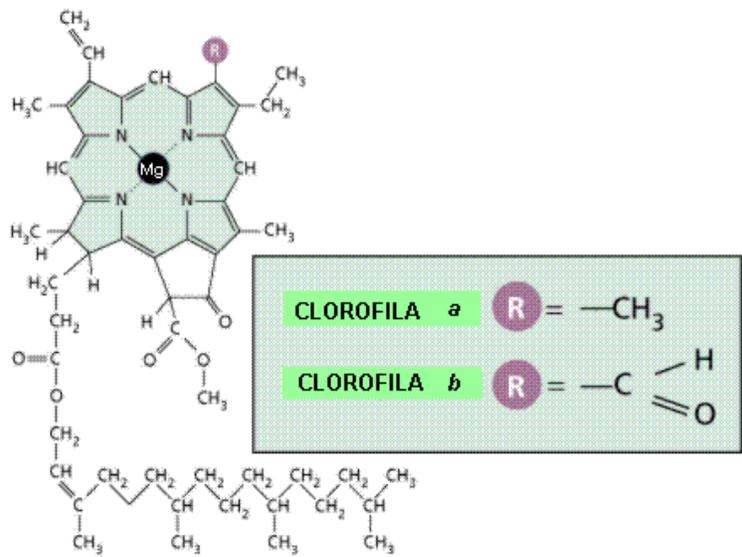
Magnesium is highly flammable, it enters in combustion easily when it is in the form of chips or powder, while in solid mass is less flammable. Once ignited it is difficult to turn off, since it reacts with the nitrogen and carbon dioxide present in the air. When burned, it produces a very intense white incandescent flame.



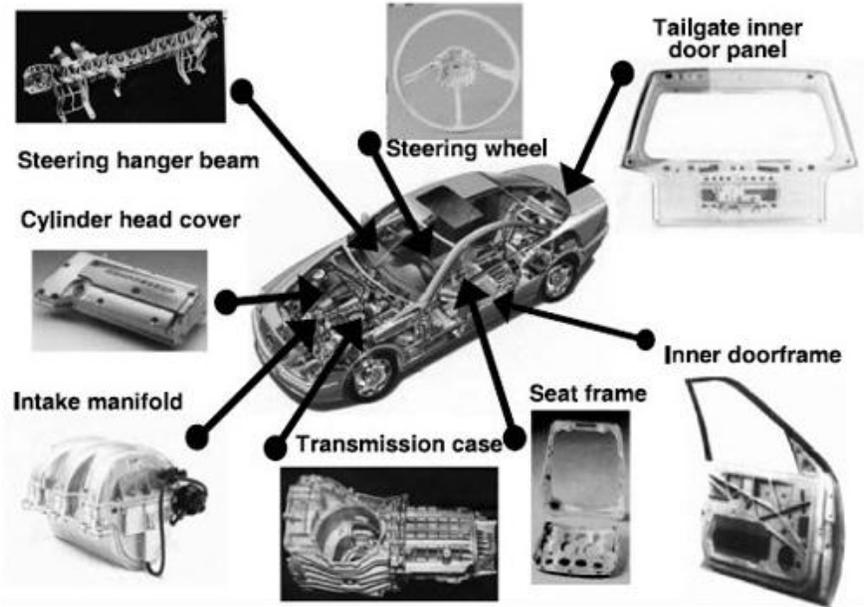
Magnesium reacts with ambient water to form small bubbles of hydrogen. It also reacts with hydrochloric acid (HCl) and hydrogen producing heat released to the environment in the form of bubbles.

The melting point of magnesium is 650°C and boiling point is 1090°C . Sound is transmitted through this material at a speed of 4940 m / s

Manganese ion is essential for the living cells. First, because it is the metal ion in the center of chlorophyll, being the 11th most abundant element in the human body, and playing a key role in manipulating polyphosphate compounds as ATP, DNA and RNA, with hundreds of enzymes that require ions magnesium to function.



One major industrial application of magnesium is in the manufacture of automobile parts and electronic components as an ideal substitute of plastics in applications requiring voltage, a high thermal conductivity that allows dissipating the heat generated in circuitry.



Magnesium is currently obtained by electrolysis of magnesium salts and its main commercial use is as an alloy with aluminum generating a relatively lightweight and strong material.

Magnesium alloys have lower resistance to cuts than any other metal, which makes them easier to machining. In turn, they have a high resistance against deformation and vibration energy can be absorbed very effectively.

Source: <http://www.artinaid.com/2013/04/magnesium/>