

Reactions

1. Metals and non-metals

CONCEPT 1

PROPERTIES OF METALS AND NON-METALS

NOTES

Metals

Metals are found on the left of the periodic table. All metals have properties in common. They are: shiny when they are cut and less reactive metals stay shiny for longer, metals are good conductors of heat and electricity, they are malleable (they can be bent and shaped without breaking). Metals are solid at room temperature, except mercury, they are generally hard and strong and have a high density. Metals are also sonorous, which means that they make a ringing sound when hit. Only three metals are magnetic (iron, cobalt and nickel). Because Steel is a mixture of elements made mostly of iron, it is also considered magnetic. The other metal elements found on the periodic table are not magnetic.

Non-metals

Non-metals also have properties in common. Non-metals are dull (not shiny) and poor conductors of heat and electricity (insulators). Non-metals are weak and brittle (they easily break or shatter when solid). Most non-metals also have a low density (they feel light for their size) and they are not sonorous (they do not make a ringing sound when hit). Some non-metals on the periodic table exist as gases at room temperature, including oxygen and chlorine and Nitrogen. One non-metal found in group 7 of the periodic table, bromine, is a liquid at room temperature. The other non-metal elements are solid at room temperature.

Uses of metals; Metals have many important uses, they can be used in electronics, medicine, construction, jewellery, machinery, automobiles and many more.

Uses of non-metals; Chlorine is used in bleaching powder and liquid bleach, which are used for cleaning purposes. Chlorine is also a very efficient disinfectant, killing harmful microbes. Noble gases such as neon, argon, krypton are used in different types of lighting.