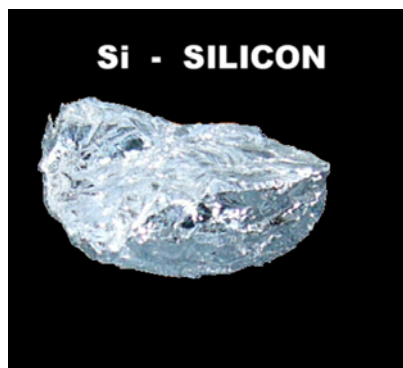


How is Silicon useful to us?



Silicon is a non-metallic element. It is not found in nature in a pure form. Pure Silicon is a hard, dark grey colored material. It shines like metals and is crystalline in nature. At ordinary temperature, it does not react with other elements, but at higher temperature it makes compounds with other elements.

The earth's crust has 28% Silicon whereas china clay contains 50% Silicon, It is also found in rocks, sand, water, bones, etc. Sand has a large quantity of Silicon.

Silicon is extracted from the compound Silicon dioxide. When Silicon dioxide is heated in an electric furnace, oxygen is removed and Silicon is separated from Silicon dioxide.

Most of Silicon is found in the form of Silica which is another name of Silicon dioxide, a compound of Silicon and Oxygen. Quartz, jasper, milky stone and sand—all are different forms of Silica. Silicate is another compound of Silica. Mica and asbestos are well known forms of Silicates.

Silicates are very useful to us. They are used in making many different kinds of glasses, enamels, china clay, etc. Sodium Silicate is used in the making of soaps, prevention of the rotting of wood and eggs and in dyeing. It is also used for smoothening and for making artificial rubber.

Chief use of Silicon in its pure form is in making photocells, transistors and Silicon chips containing micro circuits for computers and other components. A compound carbon called Silicon carborundum is used for polishing metals. By mixing Silicon in steel, its utility is enhanced. Silicon is also used for making Semiconductors which have proved very useful in our life. Silicon mixed with sand and earth is used for making bricks.