

Opportunities in Silicon Metal Manufacturing. Best Industry for Starting a Business.

Description:

Silicon Metal is known as a semi-metallic or metalloid, having several of the characteristics of metals. It is the second most abundant element in the Earth's crust after oxygen, naturally occurring in various forms of silicon dioxide or silicates and very rarely in its pure form in volcanic exhalations. Silicon metal is a hard, brittle, and blue-grey lustrous semi-conductive metal, which is used to manufacture solar cells, steel, and microchips, along with various other commodities. Due to the properties such as high corrosion resistivity, machinability, and high thermal conductivity; silicon metal is widely used to manufacture aluminum alloys, silicones, semiconductors, and solar panels.

Silicon metal is derived from quartz (silicon dioxide). It is purified elemental silicon alloyed with significant quantities of other elements such as aluminum and calcium.

Silicon metals find application in silicones and silanes, solar panels, aluminum alloys, laboratory reagents, and stainless steel, among others. The use of silicon metal in aluminum alloys is the highest. The demand for silicon metals to be used in silanes/silicones has also been significant over the years. This can be attributed to the application of silicones in the manufacturing of various chemicals and materials used in personal care products, building and construction, electronics, plastics, and textiles.

The favorable properties of silicon, such as low processing and extraction costs, reduced temperature susceptibility, easy doping, and low current leakage, make it the most preferred metal for the production of semiconductors.

A major market driver is the continuous growing demand for silicon metal for the production of aluminum alloys, which are used in the foundry, automotive, and aerospace industries. When used with aluminum, silicon improves hardness, strength, and castability, and, hence, are used significantly in the production of aluminum alloys. Further, they are used to manufacture silicon compounds and silicon wafers, which are used to manufacture semiconductors and photovoltaic cells.

For more details download PDF file.

Keywords: Silicon Metal Manufacturing, How Silicon is made? Silicon Metal, Silicon Production, Production of Silicon Metal, Silicon Metal Production Process, How is Silicon Produced? What is Silicon Metal Used for? How is Silicon Manufactured? Silicon Metal Uses, Making of Silicon Metal, Process for Production of Silicon Metal, Silicon Metal Manufacturing Plant, Manufacture of Silicon Metal, Silicon Metal Manufacture in India, Silicon Metal Production Plant, Silicon Metal Manufacturing Industry, Silicon M

Created At: 27 Apr, 2018