

Graphite

October 22, 2023 • vajiramandravi.com



About Graphite

- It is an opaque, non-metallic carbon polymorph that is blackish silver in colour and metallic to dull in sheen.
- Since it resembles the metal lead, it is also known colloquially as black lead or plumbago.
- It is formed by the metamorphosis of sediments containing carbonaceous material.
- It is a naturally occurring form of crystalline carbon.
- It is extremely soft, cleaves with very light pressure, and has a very low specific gravity.
- In contrast, it is extremely resistant to heat and nearly inert in contact with almost any other material.
- These extreme properties give it a wide range of uses in metallurgy and manufacturing.
- Molecular structure
 - It consists of a ring of six carbon atoms closely bonded together hexagonally in widely spaced layers.
 - The bonds within the layers are strong but the bonds between the layers are less in number and therefore are weaker.
 - Graphite is the stable form of carbon.
- Applications: It is used in pencils, lubricants, crucibles, foundry facings, polishes, arc lamps, batteries, brushes for electric motors, and cores of nuclear reactors.
- It is mined extensively in China, India, Brazil, North Korea, and Canada.

Q1) What is Metal?

Metals are a class of chemical elements characterized by their distinctive physical and chemical properties. These properties make them essential in various industrial, technological, and everyday applications.

Source: [China restricts exports of graphite as it escalates a global tech war](https://vajiramandravi.com/current-affairs/graphite/)

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