

About Graphite

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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 metal lead, it is also known colloquially as **black lead or plumbago**.
- **Formation:** It is formed by the metamorphosis of sediments containing carbonaceous material.
- **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 weaker.
- **Properties:**

- It is a naturally occurring form of **crystalline carbon** and is a stable form of 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.

- **Applications:** It is used in pencils, lubricants, crucibles, foundry facings, polishes, arc lamps, batteries, brushes for electric motors, and cores of nuclear reactors.
 - Globally it is mined extensively in China, India, Brazil, North Korea, and Canada.
 - Why Sri Lankan Graphite? Sri Lankan graphite is considered among the purest in the world with more **than 98% carbon content**.
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Q1: What is Graphene?

It is a one-atom-thick layer of carbon atoms arranged in a hexagonal lattice. It is the building-block of Graphite (which is used, among others things, in pencil tips).

Source: [India in talks with Sri Lanka to acquire graphite mine block](#)

Source: <https://vajiramandravi.com/current-affairs/about-graphite/>

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