

Diamond

Diamond is one of the two best known forms of carbon, whose hardness and high dispersion of light make it useful for industrial applications and jewelry. Diamonds are specifically renowned as a mineral with superlative physical qualities — they make excellent abrasives because they can be scratched only by other diamonds, ultrahard fullerite, or aggregated diamond nanorods, which also means they hold a polish extremely well and retain luster. About 130 million carats (26,000 kg) are mined annually, with a total value of nearly USD \$9 billion.

The name “diamond” derives from the ancient Greek *adamas* (“invincible”). They have been treasured as gemstones since their use as religious icons in India at least 2,500 years ago—and usage in drill bits and engraving tools also dates to early human history. Popularity of diamonds has risen since the 19th century because of increased supply, improved cutting and polishing techniques, and growth in the world economy. They are commonly judged by the “four Cs”: *carat*, *clarity*, *color*, and *cut*. Although synthetic diamonds are produced each year at nearly four times the amount of natural diamonds, the vast majority of synthetic diamonds produced are small imperfect diamonds suitable only for industrial-grade use.

Roughly 49% of diamonds originate from central and southern Africa, although significant sources of the mineral have been discovered in Canada, India, Russia, Brazil, and Australia. They are generally mined from volcanic pipes, which are deep in the Earth where the high pressure and temperature enables the formation of the crystals.

Questions Related to the Topic

1. What is the name of aggregated diamond?
2. Where is the name “diamond” derived?
3. How is diamond judged?

You can see the whole lesson from your teacher, please ask them to send it to you before the class.

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