

Definition: **malachite** from *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Common copper ore, basic copper carbonate, $\text{Cu}_2\text{CO}_3(\text{OH})_2$. It is a source of green pigment and is used as an antifungal agent in fish farming, as well as being polished for use in jewellery, ornaments, and art objects.



Image from:

[Malachite in Guide to Minerals, Rocks and Fossils](#)

Summary Article: **Malachite**

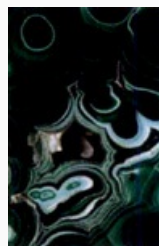
From *Guide to Gems*

Malachite is a common secondary copper mineral with a vivid green colour. Its name derives from the Greek word *moloche* meaning mallow, because it has the colour of mallow leaves. Malachite was crushed as a green pigment in the Bronze Age and has been valued as a gemstone since ancient times. The Greeks and Romans fashioned vases and sculptures from malachite and wore it as amulets to ward off evil spirits and illnesses. Later, the Russian Tsars used it as a decorative stone, quarrying vast deposits in the Ural mountains to create magnificent structures, such as the columns of St Isaac's Cathedral in St Petersburg, western Russia.

Malachite is a relatively soft mineral, but some is cut into rounded cabochons and other rounded shapes, while some is fashioned as beads. The quality required for jewellery is mined at several sites, including Eilat in Israel. This can be carved and polished to reveal alternating bands of shades of green, from pale to near-black layers, and can show intricate patterns on the polished surface. The ornamental stone is also used for items like tabletops, bowls, vases, and carved animals.

Malachite mineral is common in the oxidized zone of copper deposits and normally found in opaque green masses that are granular, knobby, and massive. It is usually with AZURITE, which has a deep azure blue colour. **Chessylite** is the name given to banded malachite and azurite occurring in Chessy, near Lyons, France. Malachite is also associated with COPPER, CUPRITE, CALCITE, CHALCOCITE, CHRYSOCOLLA, CHALCOPYRITE, and LIMONITE.

The renowned Ural deposits in Russia are becoming depleted. Most large deposits are found in copper-mining areas, with the Shaba province of Democratic Republic of Congo the major producer. Other sites are at Betzdorf, Rhineland-Palatinate, Germany; Potosi in New South Wales, Australia; Redruth in Cornwall, England; and in the United States at Bisbee in Arizona, Stevens County, Washington, and the states of Pennsylvania, North Carolina, and New Mexico. Other mines also operate in France, Mexico, Zambia, Namibia, and Sweden.



Polished slice of malachite

CHEMICAL COMPOSITION	Cu ₂ CO ₃ (OH) ₂
COLOUR	bright green
REFRACTIVE INDEX	1.85
RELATIVE DENSITY	3.9–4.0 (massive varieties as low as 3.5)
HARDNESS	3.5–4
CRYSTAL GROUP	monoclinic
CLEAVAGE	pinacoidal, perfect
FRACTURE	subconchoidal or uneven
TENACITY	brittle
LUSTRE	fibrous varieties silky, dull when massive, crystals adamantine
TRANSPARENCY	translucent
DISPERSION	none
BIREFRINGENCE	.254
PLEOCHROISM	weak
LOCATION	Australia, Democratic Republic Of Congo, England, France, Germany

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Malachite. (2003). In C. Oldershaw, *Guide to gems*. London, UK: Philip's. Retrieved from <https://search.credoreference.com/content/topic/malachite>

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