

Malachite

Mineral Reference Profile • Carbonates

Chemical / compositional reference

$\text{Cu}(\text{CO}_3)(\text{OH})$

Mohs hardness

3.5–4

Physical properties

Many react with acid, commonly show good cleavage and have low to moderate hardness.

Geological occurrence

Copper oxidation zones worldwide, especially in arid and semi-arid mining districts.

Economic, technological and cultural relevance

Construction materials, cement, lime, metallurgy, pigments, soil treatment, ornamental stone and sources of metals such as zinc, copper or iron.

Museum learning value

In the museum context, Malachite is used to connect observation with mineral identification, geological formation, material science, responsible resource use and the relationship between natural resources and society. Specimen-specific analytical data should always be read from the verified museum catalogue or laboratory record.