

Cuprite - Cu₂O

Hardness = 3.5 - 4. Cleavage: Imperfect/fair. Tolerates sonication. Soluble in concentrated acids including H₃PO₄, H₂SO₄ and HCl. Soluble in dilute HCl, warm NH₃, warm alkali solutions and boiling concentrated citric acid. Attacked by some strong detergents. Dithionite tolerance variable; some samples unaffected while other may form a dark coating and/or be reduced to metallic Cu. May be improved somewhat by treatment with a solution containing 1 g ammonium acetate per 100 mL water followed by sonication. Reported without details that cuprite can be cleaned with ammonium acetate and tetrasodium EDTA (Trilon B) but this recipe may also cause frosting and will likely attack other copper minerals present (malachite, chrysocolla, etc.). Photosensitive; turns dark.

Chalcotrichite is the fibrous, acicular variety of cuprite. Fragile. May become matted in water. Treat like cuprite. Apply mechanical cleaning methods with great care.

References

Mindat: <https://www.mindat.org/min-1172.html>

Handbook of Mineralogy: <https://www.handbookofmineralogy.org/pdfs/cuprite.pdf>

Hardinger, S. (2025) Mineral Specimen Cleaning and Development for the Amateur, 339 p.

Sinkankas, J. (1972) Gemstone & Mineral Data Book, 346 p. Winchester Press, New York.