Willemite - Zn₂SiO₄

Hardness: 5.5. Cleavage: Distinct/good. Insoluble in water. Attacked by acids, (including acetic acid) quickly by HCl with gel formation and loss of luster. Completely decomposed by saturated citric acid.

Varieties/related species (treat same as willemite): Troostite.

References

Mindat: https://www.mindat.org/min-4292.html

Handbook of Mineralogy: https://www.handbookofmineralogy.org/pdfs/willemite.pdf

Betts, J. (2025) Mineral cleaning for amateurs.

www.johnbetts-fineminerals.com/jhbnyc/articles/minclean.htm

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

Rohner, T. (2000) Properly clean minerals online cleaning book.

www.strahlen.org/stepbystep/mineralien-reinigung2.pdf. In German.

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

Weast, R., Ed. (1982) CRC Handbook of Chemistry and Physics, 2380 p., CRC Press, Inc., Cleveland.