

Sobolevite - $\text{Na}_{13}\text{Ca}_2\text{Mn}_2\text{Ti}_3(\text{Si}_2\text{O}_7)_2(\text{PO}_4)_4\text{O}_3\text{F}_3$

Hardness: 4.5–5. Cleavage: Perfect. Water sensitive/soluble and therefore intolerant of any aqueous treatment.

References

Mindat: <https://www.mindat.org/min-3699.html>

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

Duthaler, R. and Weiß, S. (2024) Mineral Cleaning for Collectors, 3rd Edition, 190 p. Duthaler, Switzerland.