**Quartz** is a hard, crystalline [mineral](https://en.wikipedia.org/wiki/Mineral) composed of [silicon](https://en.wikipedia.org/wiki/Silicon) and [oxygen](https://en.wikipedia.org/wiki/Oxygen) atoms. The atoms are linked in a continuous framework of SiO4 silicon–oxygen [tetrahedra](https://en.wikipedia.org/wiki/Tetrahedral_molecular_geometry), with each oxygen being shared between two tetrahedra, giving an overall [chemical formula](https://en.wikipedia.org/wiki/Chemical_formula) of [SiO2](https://en.wikipedia.org/wiki/Silicon_dioxide). Quartz is the second most abundant [mineral](https://en.wikipedia.org/wiki/Mineral) in [Earth](https://en.wikipedia.org/wiki/Earth)'s [continental crust](https://en.wikipedia.org/wiki/Continental_crust), behind [feldspar](https://en.wikipedia.org/wiki/Feldspar).[[7]](https://en.wikipedia.org/wiki/Quartz#cite_note-7)

Quartz exists in two forms, the normal α-quartz and the high-temperature β-quartz, both of which are [chiral](https://en.wikipedia.org/wiki/Chiral). The transformation from α-quartz to β-quartz takes place abruptly at 573 °C (846 K). Since the transformation is accompanied by a significant change in volume, it can easily induce fracturing of ceramics or rocks passing through this temperature threshold.

There are many different varieties of quartz, several of which are semi-precious [gemstones](https://en.wikipedia.org/wiki/Gemstone). Since antiquity, varieties of quartz have been the most commonly used minerals in the making of [jewelry](https://en.wikipedia.org/wiki/Jewellery) and [hardstone carvings](https://en.wikipedia.org/wiki/Hardstone_carving), especially in [Eurasia](https://en.wikipedia.org/wiki/Eurasia).

