

58610 - 58660 Quartz Powders

The name quartz is derived from the West Slavic kwardy - hard. It is still contained in the Polish twardy. In nature it occurs in two enantiomorphic crystal forms, which behave like image and mirror image. One form turns the plane of polarized light to the left (left quartz) and the other to the right (right quartz).

Natural quartz contains 80-99.8% silicon dioxide. Quartz sands with > 98% are called industrial sands.

Quartz is clearly transparent in thin sections.

Quartz, along with the minerals of the feldspar group, is the most abundant, widespread, and diverse mineral in the Earth's upper crust. As a rock-forming mineral, it is found in all silica-rich igneous rocks, e.g. granite, and in metamorphic rocks, e.g. gneisses or mica schists.

Quartz also occurs free of accompanying minerals in the form of individual crystals. The largest quartz crystals were found with a circumference of 7.5 m and a weight of 40 t in Brazil, with 168 kg in the Grossglockner group in Austria or in 1958 in Kazakhstan of the height of a two-story house and an estimated weight of 70 t found. The largest rock crystal fragment with a weight of 784 kg is in the Geological Museum in Sverdlovsk/Russia since 1968.

Of the numerous naturally occurring varieties, only the most common type, pure quartz sand, is suitable for processing. The quartz sands are fractionated in multi-deck vibrating screens and at the same time silty fines are removed by washing.

Solid quartz crystals are previously crushed into quartz grit and quartz flour by means of crushers and hammer mills. These are then processed into quartz flour in armored tube mills with wear-resistant charging and downstream air layering.

Quartz is a good heat conductor. This property was already known to the Romans. Wealthy patricians had spheres or crystals of rock crystal in their houses to cool their hands with in the summer heat.

Source: "White colorants" (2000) M.H. Bernd Hering