

## QUARTZ AND SAND.

*Quartz*, probably the most generally known mineral, consists of silica ( $\text{SiO}_2$ ). It belongs to the hexagonal system of crystallization and has a hardness of 7 on Mohs' scale. It is colourless or white when pure, though often found tinted by impurities, such as manganese and carbonaceous matter. The varieties *amethyst*, *rose quartz*, and *smoky quartz* derive their typical colours from such impurities.

Quartz is an essential constituent of many rocks. In the case of *quartzite* and *sandstone*, these rocks may consist entirely of quartz. Quartz may exist in the form of veins, or as the filling of cavities, in all rocks.

*Flint* is a somewhat impure crypto-crystalline variety of quartz, which occurs in chalk deposits.

*Sand* is the granular material resulting from the weathering and disintegration of rocks. It usually consists principally of grains of quartz. This is largely due to the hardness of quartz and its chemical stability. This natural concentration is effected by the weathering out of the other minerals of the rock. When the sand contains only a few per cent of the minerals other than quartz it is called *silica sand* or *quartz sand*.

## TRADE NAMES OF SANDS.

Most of the trade names of sands are descriptive of either their mode of occurrence or their uses.

*River sand* is the name applied to sand, of any grade, which is taken from the shores or beds of rivers. It is, as a rule, fairly free from impurities of a clay-like nature, though it may contain large percentages of feldspar, mica, hornblende, magnetite, etc.

*Lake sand* is that taken from the shores of lakes. This sand is similar in properties to the river sand, except that it is more likely to consist of rounded, rather than "sharp", or angular grains.

*Bank sand* or *pit sand* is that taken from deposits on land. It is liable to contain larger percentages of clay and loam than either river or lake sands.