

FUNDAMENTAL PROPERTIES

Soils are composed of solid components, water and air. Soils are characterized by 4 fundamental properties:

- **Granularity or texture** - It corresponds to the grain size distribution of a soil. It is a percentage by weight of the different grain sizes.
The grain size classification adopted by a large number of laboratories is based on the standard ISO 14688 1 2017 (Geotechnical investigation and testing of soils):

COBBLE	GRAVEL	SAND	SILT	CLAY
200-63mm	63- 2mm	2-0.06mm	0.06-0.002mm	0.002-0mm

For building with earth, cobble should generally be removed, and for CSEB, no gravel larger than 20 mm should be kept. Therefore, the ideal grain size for CSEB is as follows:

GRAVEL	SAND	SILT	CLAY
20-2mm	2-0.063mm	0.063-0.002mm	0.002-0mm

- **Compressibility** - It is the ability of a soil to be compressed to the maximum. It is related to the energy of compaction.
The Optimum Moisture Content (OMC) defines the compressibility.
The OMC is a percentage by weight of water to achieve the highest compression of a soil.
- **Cohesion** - It defines the capacity of soil grains to remain together. This property is strongly linked with the plasticity.