

## **Textural Classes Used in the Soils Family**

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The upper 20 inches (50 cm) of the subsoil (the control section) is used to determine the family textural class in Ultisols and Alfisols. In Spodosols, soils with spodic horizons, Entisols and Inceptisols, the control section is the 10 to 40 inch zone of the soil profile. In soils with fragipans the control section extends from the base of an Ap horizon or 25 cm to the top of the fragipan.

Sandy-skeletal – More than 35% of the soil volume is gravel sized particles from 1/8 to 3” in Diameter. There is usually less than 8% clay. A common term is very gravelly loamy sand or just gravel. The word “skeletal” means that the subsoil has 35% or more gravel sized fragments 1/8 to 3” in size.

Sandy – From 0 to 35% of the soil volume is gravel sized particles. The majority of the particles are sand sized and there is generally less than 8% clay. And loamy sand are the two textures in this class.

Loamy – Clay content varies between 0 and 35%. Sand and silt sized particles in combination make up the remainder of soil volume. In addition, gravel sized particles, although not considered in determining soil texture, can amount to 35% of the soil volume.

Loamy soils have been subdivided into 4 subclasses because of important differences in soil engineering properties.

Coarse-loamy – The clay content is between 0 and 18% and silt and sand make up the remainder. Sandy loam and loam are the two textures in this class.

Fine-loamy – The clay content is between 18 and 35%. Sand and silt make up the remainder. Textures in this class are, fine sandy, loam, sandy clay loam, clay loam and silty clay loam.

Coarse-silty – The clay content is between 0 and 18%. There is less than 15% sand and the remainder is silt. Textures in this class are silt and silt loam.

Fine-silty – The clay content is between 18 and 35% and there is less than 15% sand that is coarser than very fine. The remainder is silt. Textures are silt loam and silty clay loam.

Clayey – The soil has more than 35% clay. The remainder is sand and silt. Clayey soils are very sticky and plastic when wet and generally very hard when dry. The clayey class is separated into two subclasses in the Alfisol Order.

Fine – Soils with 35 to 60% clay in the subsoil.

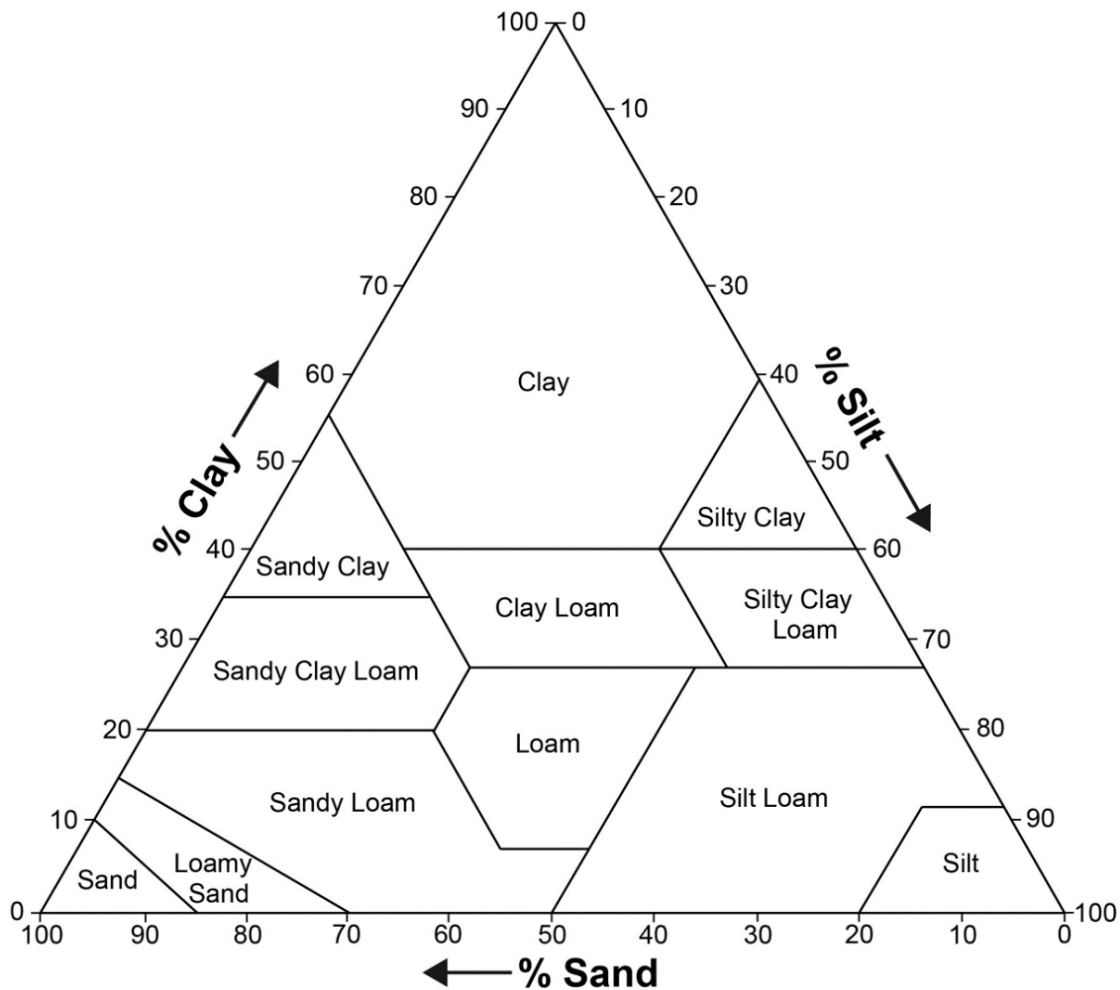
Very fine – Soils with more than 60% clay in the subsoil.

In some soils where there is an abrupt change in texture within a thickness of 5 inches strongly contrasting textural classes are used.

Fine-loamy over sandy or sand-skeletal – This particle size class definition says that within a depth of 20 to 40 inches there is an abrupt textural change with a 5-inch or less transition thickness between the upper finer soil material and coarser lower soil material in the profile.

There are some Great Groups where particle-size class names are redundant. Psamments and Psammaquents, by definition, have sandy particle classes and no particle-size class name is needed in the family name.

In Histosols no particle class name is used unless mineral material occurs in the profile above a depth of 40 inches.



## References

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