

Field Identification of Soils Guide

Field inspectors/technicians should be able to make an approximate identification of soil based on experience, visual aspects, and physical characteristics. Below is a guide to help you in determine the characteristics of soil.

Note that some specifications described in the following content may not be the same as the specifications followed by your agency. Always check with your State agency's standards and specifications when using these guidelines.

Sections

- **Field Soil Samples**
- **Sand**
- **Silt**
- **Clay**

Field Soil Samples

- Field soil samples are identified by:**
 - Texture (slick, gritty, soapy, etc.)
 - Color
 - Odor
 - Particle size
 - Plasticity
 - Structure (angular, blocky, etc.)
 - Moisture
 - Stiffness (soft, firm, etc.)

Sand

- Sand is easily identifiable by sight and individual grains can be seen with the naked eye.
- There is very little cohesion, so the grains do not stick together well.
- Sand does not form a ribbon when squeezed and spread between the thumb and finger.

Silt

- Silt has a floury consistency, low cohesion, and it crumbles easily when dry and shears easily when wet.
- A poor ribbon is formed when squeezed between the thumb and finger.
- Silt washes off skin easily.
- When it is too wet, pumping is observed in the field.

Clay

- Clay has cohesive properties, a soapy appearance when smeared between the fingers, and a ribbon is formed easily when squeezed between the thumb and finger.
- It is difficult to crumble when dry and a fingerprint impression made in clay is well defined.