



Atterberg Limits



Atterberg Limits are the measures of the critical water content of fine-grained soils.

Depending on the water content, fine-grained soil can be categorized into four states of soil.

- Solid
- Semi-Solid
- Plastic
- Liquid

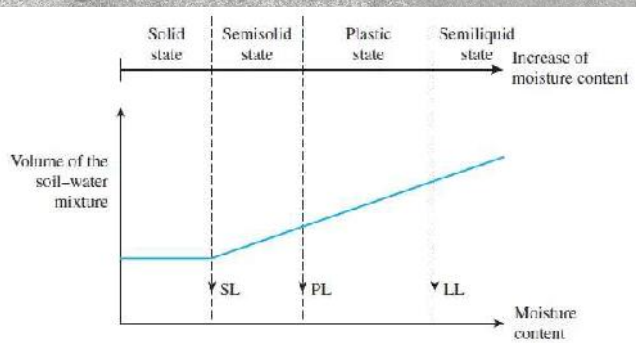




Changes in between these stages are the Atterberg limits.

Namely, they are as follows.

Shrinkage Limit (SL)
 Plastic Limit (PL)
 Liquid Limit (LL)



Atterberg limits can use to distinguish between different types of silts and clays.

Use for the classification of soils.

Both the soil classification systems, the Unified system, and the AASHTO system use these limits in combination with other parameters to classify the soil.



Liquid Limit (LL)

The moisture content, in percentage, at which soil changes from a liquid to a plastic state.

The Liquid Limit is the moisture content at which fine-grained soil no longer flows like a liquid.



Plastic Limit (PL)

The moisture content, in percentage, at which the soil change from plastic to a semi-solid state.

The plastic limit is the moisture content at which fine-grained soil can no longer be remolded without cracking.



Shrinkage Limit (SL)

The moisture content, in percentage, at which soil change from a semisolid to a solid state.

Shrinkage Limit is the moisture content at which fine-grained soils no longer change volume upon drying. Any loss of moisture is compensated by the entry of air into the pores.



Thank you



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