



## Liquid Limit

### UMI - 122

The liquid limit defined as the moisture content at which the soil passes from plastic state to liquid state, is very helpful in the classification of the potential properties of the soil material. The liquid limit gives a measure of the shearing resistance which a soil has when mixed with water. The liquid limit of soil can be determined by Casagrande Method or Cone Penetrometer Method.

Ref. Standards : ASTM D418, AASHTO T89



### Cone Penetrometer Method

Ref. Standards

IS:2720 (Part 5)

BS:1377

Cone Penetrometer method has several advantages over the Casagrande method. It is easier to perform this test and the results are not so dependent on the design of the apparatus or the judgement of the operator and it is applicable to a wider range of soils. The test is based on the relationship between moisture content and the penetration of the cone into the soil sample. The moisture content at a given depth of penetration of the cone is taken as the liquid limit.

As an inferential test, empirical correlations have been developed to assess the shear strength of soils at liquid limit.

- Reduces operator error
- Applicable to a wide range of soils
- Gives reproducible test results
- Provides direct measurement of penetration

### UMI - 143

#### Cone Penetrometer, Automatic (Universal Penetrometer)

Enables the determination of liquid limit simply and quickly. The unit is supplied complete with a stainless steel penetration test cone 35mm long with a smooth polished surface and an angle of 30°. Facility exists for adjusting cone height in relation to the specimen.

Cone Penetrometer consists of one each of the following :

##### Universal Penetrometer

##### Penetration Test Cone

##### Penetration Test Cup, 55mm dia x 40mm deep



Moisture Cone

UMI-143.1



UMI-144



UMI-143

Note : Due to constant R&D, specifications are subject to change without prior notice.