Australian Standard™

Methods of testing soils for engineering purposes

Method 3.9.2: Soil classification tests—Determination of the cone liquid limit of soil—One-point method

1 SCOPE

This Standard sets out the method for determining the cone liquid limit of a soil using a cone penetrometer and only one measurement of moisture content. This method enables a result to be obtained when only a small amount of soil is available. The definition of liquid limit inherent in this method is not the same as that in the method using the Casagrande apparatus (AS 1289.3.1.1) although the values can be numerically similar (see Note 1).

NOTES:

1 Using the cone penetrometer, the one-point method is likely to give results that are less reliable than those obtained using the four-point method (see AS 1289.3.9.1) and is therefore suitable only where a less accurate result is acceptable.

2 If it is suspected that the liquid limit is higher than about 120%, the method specified in AS 1289.3.9.1 should be followed using the appropriate sample size.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1289	Methods of testing soils for engineering purposes
1289.1.1	Method 1.1: Sampling and preparation of soils—Preparation of disturbed soil samples for testing
1289.2.1.1	Method 2.1.1: Soil moisture content tests—Determination of the moisture content of a soil—Oven drying method (standard method)
1289.3.1.1	Method 3.1.1: Soil classification tests—Determination of the liquid limit of a soil—Four-point Casagrande method
1289.3.9.1	Method 3.9.1: Soil classification tests—Determination of the cone liquid limit of a soil

BS

1377	Methods of test for soils for civil engineering purposes
2000	Methods of test for petroleum and its products
2000.49	Part 49: Bitumen and bituminous binders—Determination of needle penetration

3 APPARATUS

The following apparatus is required:

(a) Enamel, glass or plastic bowls approximately 150 mm diameter, with suitable close-fitting covers.