

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS

1.0 SCOPE

1.1 This method describes the procedures used to determine the liquid limit, plastic limit, and plasticity index of soils, based on the one point liquid limit method.

2.0 APPLICABLE DOCUMENTS

2.1 ASTM D4318 Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Method B - One Point Liquid Limit)

3.0 APPARATUS AND PROCEDURE

3.1 The equipment and procedures used are as per those used in the above-mentioned publication with the following modifications:

3.1.1 Use a 400 μm sieve instead of a 425 μm .

4.0 CALCULATION

4.1 Liquid Limit (LL) = $W_n(N/25)^{0.121}$

where :

N = the number of blows causing closure of the groove at water content

W_n = water content

4.2 Plastic Limit (PL) = the average of the water contents of 2 plastic limit trials

4.2 Plasticity Index (PI) = LL – PL

where:

LL = liquid limit

PL = plastic limit