

Australian Standard[®]

Methods of testing soils for engineering purposes

Method 3.3.2: Soil classification tests— Calculation of the cone plasticity index of a soil

AS 1289.3.3.2—2009

1 SCOPE

This Standard sets out a method to calculate the plasticity index of a soil as derived from the cone liquid limit and the plastic limit of a soil.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1289 Methods of testing soils for engineering purposes

1289.3.2.1 Method 3.2.1: Soil classification tests—Determination of the plastic limit of a soil—Standard method

1289.3.9.1 Method 3.9.1: Soil classification tests—Determination of the cone liquid limit of a soil

1289.3.9.2 Method 3.9.2: Soil classification tests—Determination of the cone liquid limit—One-point method

3 PROCEDURE

The procedure shall be as follows:

- (a) Determine cone liquid limit in accordance with AS 1289.3.9.1 or AS 1289.3.9.2. If the cone liquid limit cannot be determined the soil is considered to be non-plastic and the plastic limit need not be determined.
- (b) If a cone liquid limit value has been determined, perform the plastic limit in accordance with AS 1289.3.2.1 ensuring that the same method of preparation of the soil for the cone liquid limit and plastic limit has been followed.

4 CALCULATIONS

Using the reported values of w_{CL} and w_P , calculate the cone plasticity index (I_{CP}) from the following equation:

$$I_{CP} = w_{CL} - w_P$$

where

I_{CP} = cone plasticity index, in percent

w_{CL} = cone liquid limit, in percent

w_P = plastic limit, in percent