

**Weighted Plasticity Index –  
PI x Percent passing 0.425 mm sieve**

**1. Scope**

The test calculates the Weighted Plasticity Index (WPI) (reference A) as the product of Plasticity Index ( $I_P$ ) and Percent passing the 0.425 mm sieve (G); using values obtained from plasticity index and grading test reports for samples of Type A earthworks material obtained post compaction (reference B).

**2. Procedure**

- (a) Record material source and placement location, test lot bounds and test site to which the calculation refers.
- (b) Obtain from the plasticity index test report the plasticity index value ( $I_P$ ) for the material. Record the report number.
- (c) Obtain from the particle size distribution test report the value (G) for the percent passing the 0.425 mm sieve for the material. Record the report number.
- (d) Calculate the value of the Weighted Plasticity Index (WPI), as Plasticity Index x Percent passing 0.425 mm sieve, using the formula:

$$WPI = I_P \times G$$

where

- WPI = Weighted Plasticity Index
- $I_P$  = Plasticity Index value for the material (%)
- G = Percent passing the 0.425 mm sieve (%)

**3. Reporting**

The test report shall include the following information, and may be combined in a report with other test data from the same sample:

- (a) The source and description of the material.
- (b) Location of test sites, and test lot boundaries.
- (c) Date of sampling.
- (d) The report number(s), applicable, to the test results used in the calculations.
- (e) The values of plasticity index (%) and grading (%) used in the calculation.
- (f) The value of the Weighted Plasticity Index (WPI), to the nearest 10 units.
- (g) Reference to this Test Method (RC 326.01).

**4. References**

- A. Austroads AGPT04A/08 - *Guide to Pavement Technology Part 4A: Granular Base and Subbase Materials*, 2008; Appendix C.4.3 Weighed plasticity index.
- B. VicRoads Standard Specification Section 204 – *Earthworks* Clauses 204.04(b) and 204.14(a) use PI as the symbol for plasticity index, and are relevant to this test. Australian Standards use  $I_P$  as the symbol for plasticity index.

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**VicRoads Test Method - Revision Summary**

**RC 326.01 – Weighted Plasticity Index – PI x Percent passing 0.425 mm sieve**

Date	Clause	Description of Revision	Authorised by
April 2016	Full method	New Issue	Manager – Construction Materials