Australian Standard®

Methods of test for supplementary cementitious materials for use with portland cement

Method 2: Determination of moisture content

PREFACE

This Standard was prepared by the Standards Australia Committee on Supplementary Cementitious Materials for use with Portland Cement, to supersede (in part) AS 1129, *Fly ash for use in concrete, Part 3: Methods of Test.*

METHOD

1 SCOPE This Standard sets out the reference method for determination of the moisture content of supplementary cementitious materials.

2 REFERENCED DOCUMENT The following document is referred to in this Standard:

AS
3582 Supplementary cementitious materials for use with portland cement
3582.1 Part 1: Fly Ash

3 PRINCIPLE A weighed specimen is heated for a prescribed period at specified temperature and the percentage mass loss is calculated.

4 APPARATUS The following apparatus is required:

(a) Balance, capable of weighing the shallow dish and sample to an accuracy of 0.001 g.

(b) Desiccator.

(c) Drying oven, capable of being maintained at 105°C to within ±5°C. A mechanically ventilated oven is preferred.

(d) Shallow dish, inert to the test sample at temperatures of up to 110°C. The dish shall be dried at 105 ±5°C to constant mass (m_D) and stored in the desiccator before use.

5 PROCEDURE The procedure shall be as follows:

(a) Place a test portion of approximately 10 g of the test sample in the tared dish (m_D), spread it evenly in the dish, and weigh to the nearest 0.01 g (m_1).

(b) Heat the dish and contents in the oven at 105°C for 60 ±5 min.

(c) Cool the dish and contents in the desiccator.

(d) Reweigh the dish and contents to the nearest 0.01 g (m_2).

6 CALCULATION Calculate the moisture content to the nearest 0.1 percent from the following equation:

$$\text{Moisture content} = \frac{m_1 - m_2}{m_1 - m_D} \times 100$$