

- [Home Home](#)
- [About this portal](#)
- [Latest updates](#)

  
  

[Save](#)

[Resource detail](#)  
[Citations](#)

## AS 1289.5.8.1-1995 Methods of testing soils for engineering purposes - Soil compaction and density tests - Determination of field density and field moisture content of a soil using a nuclear surface moisture-density gauge - Direct transmission mode

[View on Information Provider website](#)

### Abbreviation

AS 1289.5.8.1-1995

### Amendment

AS 1289.5.8.1-1995/Amdt No. 1-1999

### Valid from

05/05/1995

---

### Information provider

SAI Global

### Author

Standards Australia

### Information type

Australian Standard

### Format

PDF, Hard copy

---

### Cited By

[This resource is cited by 3 documents \(show Citations\)](#)

---

### Description

This Standard sets out the method for determining the field density of a soil using a nuclear surface moisture-density gauge in the direct transmission mode of operation.

It describes the method for determining the field moisture content of a soil using the same device, but other methods of moisture content determination may also be used. Gauges determine the gross mass per unit volume (field wet density) of the soil and the mass of water per unit volume (field water content) of the soil.

Field dry density and moisture content can be calculated from these values.

### Scope

This method is applicable to soils having not more than 20% by mass of particles retained on the 37.5 mm sieve.

Some soils containing variable percentages of chemically-bound water or other neutron moderators or absorbers may require the

moisture content of the material to be determined in accordance with AS 1289.2.1.1 or one of the subsidiary methods AS 1289.2.1.2, 2.1.4, 2.1.5 or 2.1.6.

Because of the variety of gauges available, this method does not detail the operation of the gauge but refers the operator to the manufacturer's handbook.

When nuclear gauges are used for density or moisture measurement, the volume of material being assessed is not precisely known. However, reference to the manufacturer's handbook and current literature may indicate the likely volume. The zone of influence for the nuclear moisture function of a gauge is normally restricted to less than 150 mm below the base of the gauge. A nuclear gauge gives an indirect measure of field density and field moisture content and hence requires calibration in accordance with AS 1289.E8.4. Regular checks on the operation and the calibration of the gauge are also required.

When the moisture content is measured using the gauge, the intercept of the moisture calibration equation needs to be determined for each material being tested.

For assistance with locating previous versions, please contact the information provider.

[View on Information Provider website](#)

For assistance with locating previous versions, please contact the information provider.

This resource is cited by:

## **AS 1289.5.8.1-1995 Methods of testing soils for engineering purposes - Soil compaction and density tests - Determination of field density and field moisture content of a soil using a nuclear surface moisture-density gauge - Direct transmission mode**

This document is CITED BY:

- [AS/NZS 2566.1:1998](#)

AS 1289.5.8.1-1995 is cited by AS/NZS 2566.1:1998 (R2018) Buried Flexible pipelines. Structural Design

- [AS/NZS 2566.2:2002](#)

AS 1289.5.8.1-1995 is cited by AS/NZS 2566.2:2002 (R2016) Buried Flexible pipelines - Installation

- [AS/NZS 3725:2007](#)

AS 1289.5.8.1-1995 is cited by AS/NZS 3725:2007 Design for installation of buried concrete pipes

## **AS 1289.5.8.1-1995 Methods of testing soils for engineering purposes - Soil compaction and density tests - Determination of field density and field moisture content of a soil using a nuclear surface moisture-density gauge - Direct transmission mode**

### **Description**

This Standard sets out the method for determining the field density of a soil using a nuclear surface moisture-density gauge in the direct transmission mode of operation.

It describes the method for determining the field moisture content of a soil using the same device, but other methods of moisture content determination may also be used. Gauges determine the gross mass per unit volume (field wet density) of the soil and the

mass of water per unit volume (field water content) of the soil.

Field dry density and moisture content can be calculated from these values.

[View on Information Provider website](#)

[AS 1289.5.8.1-1995 Methods of testing soils for engineering purposes - Soil compaction and density tests - Determination of field density and field moisture content of a soil using a nuclear surface moisture-density gauge - Direct transmission mode](#)

#### Description

This Standard sets out the method for determining the field density of a soil using a nuclear surface moisture-density gauge in the direct transmission mode of operation.

It describes the method for determining the field moisture content of a soil using the same device, but other methods of moisture content determination may also be used. Gauges determine the gross mass per unit volume (field wet density) of the soil and the mass of water per unit volume (field water content) of the soil.

Field dry density and moisture content can be calculated from these values.

[View on Information Provider website](#)

This resource does not cite any other resources.

## **AS 1289.5.8.1-1995 Methods of testing soils for engineering purposes - Soil compaction and density tests - Determination of field density and field moisture content of a soil using a nuclear surface moisture-density gauge - Direct transmission mode**

This resource does not CITE any other resources.

Back

Close

#### Table of Contents

Print [Save](#) Email

[Feedback](#)


- [Contact us](#)
- [Privacy policy](#)
- [Disclaimer](#)
- [Copyright](#)


[Feedback](#)