Skip to main content Skip to primary navigation Menu	
<ul> <li><u>Home Home</u></li> <li><u>About this portal</u></li> <li><u>Latest updates</u></li> </ul>	
Print Save Email Resource detail	
Citations	
AS/NZS 4456:2003 Masonry units	, segmental pavers and flags - Methods of test

#### Table of Contents View on Information Provider website {{ linkText }} Abbreviation AS/NZS 4456:2003 Amendment Amendments Set A1, Set A2 - appended. Valid from 24/09/2003 Replaces AS/NZS 4456.0:1997, AS/NZS 4456.1:1997, AS/NZS 4456.2:1997, AS/NZS 4456.3:1997, AS/NZS 4456.4:1997, AS/NZS 4456.5:1997, AS/NZS 4456.6:1997, AS/NZS 4456.7:1997, AS/NZS 4456.8:1997, AS/NZS 4456.9:1997, AS/NZS 4456.10:1997, AS/NZS 4456.11:1997, AS/NZS 4456.12:1997, AS/NZS 4456.13:1997, AS/NZS 4456.14:1997, AS/NZS 4456.15:1997, AS/NZS 4456.16:1997, AS/NZS 4456.17:1997, AS/NZS 4456.18:1997 Information provider Standards New Zealand Author Standards New Zealand, Standards Australia Information type New Zealand Standard Format PDF Cited By

This resource is cited by 4 documents (show Citations) Cites

This resource cites 1 document (show Citations)

#### Description

This Standard provides a general introduction and a series of 19 test methods for masonry units and segmental pavers.

The tests are for sampling, mean and standard deviation, and for determining dimensions, compressive strength, breaking load, potential to effloresce, core percentage and material thickness, moisture content and dry density, abrasion resistance, resistance to salt attack, expansion, contraction, pitting due to salt attack.

Cited in Ministry's Simple House Acceptable Solution.

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

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

This resource is cited by:

### AS/NZS 4456:2003 Masonry units, segmental pavers and flags - Methods of test

This document is CITED BY:

• SH/AS1 (First edition, unamended)

AS/NZS 4456:2003 is cited by SH/AS1 Simple House Acceptable Solution

• CP01:2011 (Errata 1 January 2015)

AS/NZS 4456:2003 is cited by Code of Practice for Weathertight Concrete and Concrete Masonry Construction

• NZS 3116:2002

AS/NZS 4456:2003 is cited by NZS 3116:2002 Concrete segmental and flagstone paving

• NZS 4230:2004

AS/NZS 4456:2003 is cited by NZS 4230:2004 Design of reinforced concrete masonry structures

Back

### AS/NZS 4456:2003 Masonry units, segmental pavers and flags - Methods of test

Show what documents this resource is CITED BY Show what documents this resource CITES

Description

This Standard provides a general introduction and a series of 19 test methods for masonry units and segmental pavers.

The tests are for sampling, mean and standard deviation, and for determining dimensions, compressive strength, breaking load, potential to effloresce, core percentage and material thickness, moisture content and dry density, abrasion resistance, resistance to salt attack, expansion, contraction, pitting due to salt attack.

Cited in Ministry's Simple House Acceptable Solution.

View on Information Provider website

AS/NZS 4456:2003 Masonry units, segmental pavers and flags - Methods of test

#### Description

This Standard provides a general introduction and a series of 19 test methods for masonry units and segmental pavers.

The tests are for sampling, mean and standard deviation, and for determining dimensions, compressive strength, breaking load, potential to effloresce, core percentage and material thickness, moisture content and dry density, abrasion resistance, resistance to salt attack, expansion, contraction, pitting due to salt attack.

Cited in Ministry's Simple House Acceptable Solution.

View on Information Provider website

This resource cites:

### AS/NZS 4456:2003 Masonry units, segmental pavers and flags - Methods of test

This document CITES:

Australian Standards

• <u>AS 3700:2001</u>

AS/NZS 4456:2003 cites AS 3700:2001 Masonry structures

Back	
Close	

Table of Contents

#### Part 0: General introduction and list of methods

- 0.1 Scope
- **0.2 Referenced Documents**
- 0.3 Definitions
- Method 1: Sampling For Test
- 1.1 Scope
- **1.2 Selection**
- **1.3 Referenced Documents**
- **1.4 Definitions**
- 1.5 Quantity And Size Of Test Sample
- **1.6 Specimen Preparation**
- 1.7 Use Of Specimen Or Unit In More Than One Test
- **1.8 Inability To Achieve Full Potential**
- 1.9 Identification
- 1.10 Recording
- 1.11 Report
- 1.12 Storage

Method 2: Assessment Of Mean And Standard Deviation

2.1 Scope

- 2.2 Referenced Document
- 2.3 General
- 2.4 Definitions
- 2.5 Means
- 2.6 Unbiased Standard Deviation
- 2.7 Coefficient Of Variation
- **Method 3: Determining Dimensions**
- 3.1 Scope
- **3.2 Referenced Documents**
- 3.3 Definition
- 3.4 Method A Determination Of Cumulative Dimensions
- 3.4.1 Apparatus
- 3.4.2 Test Specimens
- 3.4.3 Procedure
- 3.4.4 Recording
- 3.4.5 Report

## 3.5 Method B – Determination Of Measurements Of Individual Units

- 3.5.1 Apparatus
- 3.5.2 Test Specimens
- 3.5.3 Procedure
- 3.5.4 Recording
- 3.5.5 Report

### Method 4: Determining Compressive Strength Of Masonry Units

- 4.1 Scope
- **4.2 Referenced Documents**
- 4.3 Definition
- 4.4 Principle

### 4.5 Apparatus

### 4.6 Preparation Of Test Specimens

- 4.6.1 Selection
- 4.6.2 Test Specimens
- 4.6.3 Where Units Can Be Tested Whole
- 4.6.4 Where Units Cannot Be Tested Whole
- 4.6.5 Filling Of Recesses
- 4.6.6 Conditioning Of Specimens
- 4.6.7 Dimensions Used For Calculations
- 4.7 Procedure
- 4.8 Calculations
- 4.8 Recording
- 4.9 Report

Method 5: Determining The Breaking Load Of Segmental Pavers And Flags

- 5.1 Scope
- **5.2 Referenced Documents**
- **5.3 Definitions**
- 5.4 Principle
- 5.5 Apparatus
- 5.6 Preparation Of Test Specimens
- 5.7 Procedure
- 5.8 Recording
- 5.9 Report
- Method 6: Determining Potential To Effloresce
- 6.1 Scope
- **6.2 Referenced Document**
- 6.3 Definitions

- 6.4 Principle
- 6.5 Apparatus
- 6.6 Preparation Of Test Specimens
- 6.7 Procedure
- 6.8 Interpretation Of Results
- 6.9 Recording
- 6.10 Report
- Method 7: Determining Core Percentage And Material Thickness
- 7.1 Scope
- 7.2 Referenced Document
- 7.3 Principle
- 7.4 Definitions
- 7.5 Apparatus
- 7.6 Test Sample
- 7.6.1 Selection Of Test Specimens
- 7.6.2 Preparation Of Test Specimens

## 7.7 Procedure

- 7.7.1 Determination Of Core Volume By Direct Measurement
- 7.7.2 Determination Of Core Volume (V) By Sand Filling
- 7.7.3 Determination Of Core Volume (V) By Immersion Weighing
- 7.7.4 Determination Of Gross Volume

# 7.8 Calculations

- 7.8.1 Core Volume Percentage
- 7.8.2 Material Thickness
- 7.9 Recording
- 7.10 Report

Method 8: Determining Moisture Content, Dry Density And Ambient Density

- 8.1 Scope
- 8.2 Referenced Documents
- 8.3 Definitions
- 8.4 Principle
- 8.5 Apparatus
- 8.6 Preparation Of Test Specimens
- 8.7 Notation
- 8.8 Procedure
- 8.9 Calculations
- 8.9.1 Volume
- 8.9.2 Dry Density
- 8.9.3 Ambient Density
- 8.9.4 Moisture Content
- 8.9.5 Calculation Of Mean Results
- 8.10 Recording
- 8.11 Report
- Method 9: Determining Abrasion Resistance
- 9.1 Scope
- 9.2 Principle
- 9.3 Referenced Documents
- 9.4 Definitions
- 9.5 Notation
- 9.6 Apparatus
- 9.7 Preparation Of Test Specimens
- 9.8 Procedure
- 9.9 Calculation

9.10 Recording

9.11 Report

### Method 10: Determining Resistance To Salt Attack

10.1 Scope

### **10.2 Principle**

- **10.3 Referenced Documents**
- **10.4 Definitions**
- **10.5 Apparatus And Reagent**
- 10.5.1 General
- 10.5.2 Method A
- 10.5.3 Method B

#### 10.6 Test Sample

- 10.6.1 Selection
- **10.6.2 Preparation Of Test Specimens**
- 10.6.3 Conditioning

### **10.7 Test Solution**

- 10.7.1 General
- 10.7.2 Preparation Of Sodium Sulphate Solution
- **10.7.3 Preparation Of Sodium Chloride Solution**

#### **10.8 Procedure**

- 10.8.1 General
- 10.8.2 Method A
- 10.8.3 Method B

#### 10.9 Recording

- 10.9.1 General
- 10.9.2 Method A
- 10.9.3 Method B
- 10.10 Report

10.10.1 General

10.10.2 Method A

10.10.3 Method B

### Method 11: Determining Coefficients Of Expansion

- 11.1 Scope
- **11.2 Referenced Document**
- **11.3 Definitions**
- 11.4 Notation
- **11.5 Coefficient Of Expansion Of Fresh Units**
- 11.5.1 Principle
- 11.5.2 Apparatus
- **11.5.3 Preparation Of Test Specimens**
- 11.5.4 Procedure
- 11.5.5 Calculation Of Coefficients Of Expansion
- 11.5.6 Records
- 11.5.7 Report
- 11.5.8 Steaming Time Adjustments At Elevations 100 M And Above

### 11.6 Coefficient Of Expansion Of Non-Kiln-Fresh Units

- 11.6.1 Principle
- 11.6.2 Apparatus
- **11.6.3 Preparation Of Test Specimens**
- 11.6.4 Procedure
- 11.6.5 Calculation Of Coefficients Of Expansion
- 11.6.6 Records
- 11.6.7 Report

#### 11.7 Past Expansion

- 11.7.1 Principle
- 11.7.2 Apparatus
- **11.7.3 Preparation Of Test Specimens**

#### 11.7.4 Procedure

- 11.7.5 Calculation Of Past Expansion
- 11.7.6 Records
- 11.7.7 Report

#### **11.8 Coefficient Of Residual Expansion**

- 11.8.1 Principle
- 11.8.2 Records
- 11.8.3 Report

### Method 12: Determining Coefficients Of Contraction

- 12.1 Scope
- **12.2 Referenced Document**
- **12.3 Definitions**
- 12.4 Notation
- 12.5 Apparatus

#### **12.6 Coefficient Of Residual Curing Contraction**

- 12.6.1 Principle
- 12.6.2 Preparation Of Test Specimens
- 12.6.3 Procedure
- 12.6.4 Calculation Of Curing Contraction
- 12.6.5 Recording
- 12.6.6 Report

#### **12.7 Coefficient Of Drying Contraction**

- 12.7.1 Principle
- 12.7.2 Preparation Of Test Specimens
- 12.7.3 Procedure
- 12.7.4 Calculation Of Drying Contraction
- 12.7.5 Recording
- 12.7.6 Report

### Method 13: Determining Pitting Due To Lime Particles

- 13.1 Scope
- **13.2 Referenced Documents**
- **13.3 Definitions**
- 13.4 Principle
- 13.5 Apparatus
- **13.6 Preparation Of Test Specimens**
- 13.7 Procedure
- **13.8 Interpretation Of Results**
- 13.9 Recording
- 13.10 Report

### Method 14: Determining Water Absorption Properties

- 14.1 Scope
- 14.2 Referenced Document
- 14.3 Definitions
- 14.4 Principle
- 14.5 Apparatus
- 14.6 Condition Of Sample
- 14.7 Preparation Of Test Specimens
- 14.8 Notation
- **14.9 Test Procedure**
- 14.9.1 Determination Of Dry Mass (M1)
- 14.9.2 Cold Water 24-H Immersion Test
- 14.9.3 Five-Hour Boiling Test
- 14.10 Recording
- 14.11 Report

### Method 15: Determining Lateral Modulus Of Rupture

- 15.1 Scope
- **15.2 Referenced Documents**
- **15.3 Definitions**
- 15.4 Principle
- 15.5 Apparatus
- **15.6 Preparation Of Test Specimens**
- 15.6.1 Selection
- **15.6.2 Dimension Used For Calculations**
- **15.7 Procedure**
- **15.8 Calculation Of Results**
- 15.9 Recording
- 15.10 Report
- Method 16: Determining Permeability To Water
- 16.1 Scope
- **16.2 Referenced Document**
- **16.3 Definitions**
- 15.4 Principle
- 16.5 Apparatus
- **16.6 Preparation Of Test Specimens**
- 16.7 Procedure
- 16.8 Recording
- 16.9 Report
- Method 17 Determining Initial Rate Of Absorption (Suction)
- 17.1 Scope

- **17.2 Referenced Documents**
- 17.3 Principle
- 17.4 Apparatus
- **17.5 Preparation Of Test Specimens**
- 17.5.1 General
- 17.5.2 Preparation For Large Units
- 17.5.3 Pre-Conditioning
- 17.6 Procedure
- **17.7 Calculations Of Results**
- 17.7.1 Initial Rates Of Absorption
- 17.8 Recording
- 17.9 Report

Method 18: Determining Tensile Strength Of Masonry Units And Segmental Pavers

- 18.1 Scope
- **18.2 Referenced Documents**
- **18.3 Definitions**
- **18.4 Preparation Of Test Specimens**
- **18.5 Number Of Specimens**
- 18.6 Apparatus
- 18.7 Procedure
- **18.8 Calculation Of Results**
- 18.9 Recording
- 18.10 Report
- Method 19: Determination Of Bow
- 19.1 Scope

- **19.2 Referenced Documents**
- **19.3 Definitions**
- **19.4 Principle**
- **19.5 Application**
- 19.6 Apparatus
- **19.7 Preparation Of Test Specimens**
- **19.8 Procedure**
- **19.9 Calculations**
- 19.10 Recording

### 19.11 Report



**Feedback**