

Australian/New Zealand Standard™

**Masonry units, segmental pavers and flags—
Methods of test****Method 11: Determining coefficients of
expansion**

This Standard incorporates Amendment No. 1 (August 2004). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

1 SCOPE

This Standard sets out the methods for determining the coefficients of expansion of masonry units, segmental pavers and flags. The coefficients of expansion estimated by these tests represent the total 15 year expansion of either kiln-fresh or non-kiln-fresh fired clay units. Provision is also included for the estimation of gas expansion and of residual expansion to 15 years, of units of any age.

2 REFERENCED DOCUMENTS

The following document is referred to in this Standard:

AS/NZS

4456	Masonry units, segmental pavers and flags—Methods of test
4456.0	Part 0: General introduction and list of methods
4456.1	Method 1: Sampling for testing
4456.2	Method 2: Assessment of mean and standard deviation

3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS/NZS 4456.0 apply.

4 NOTATION

The following symbols are used in this Standard:

L	= overall length of unit, in millimetres
Z_i	= initial gauge reading of reference bar (average of two readings), in millimetres
	= $(Z_1 + Z_2)/2$
Z_f	= final gauge reading of reference bar (average of two readings), in millimetres
	= $(Z_3 + Z_4)/2$
Y_i	= initial gauge reading of unit before steaming or refiring, in millimetres
Y_f	= final gauge reading of unit after steaming or refiring, in millimetres
dL	= change in length of the specimen due to steaming or refiring, in millimetres
dZ	= differences between final and initial gauge reading ($Z_i - Z_f$) of the reference bar, in millimetres
ΔL	= percentage change in length of each unit due to steaming or refiring