STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 4489.4.3—1997
Test methods for limes and limestones
Method 4.3: Soundness—Autoclave

RECONFIRMATION NOTICE

Major stakeholders of this publication have been consulted and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

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AS 4489.4.3—1997
Reconfirmed 2016

Australian Standard®

Test methods for limes and limestones

Method 4.3: Soundness—Autoclave

1 SCOPE This Standard sets out the method for determining the expansion of portland cement due to lime pastes.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
3972	Portland and blended cements
4489	Test methods for limes and limestones
4489.4.1	Soundness—Pat

3 PRINCIPLE The sample of hydrated lime is mixed with portland cement and water to give a paste of standard consistency and the expansion of this paste is measured after subjection to standard autoclave conditions. The expansion of a paste of portland cement and water only, also of standard consistency, is measured after subjection to standard autoclave conditions and this expansion is subtracted from the first measurement to give the expansion due to the lime.

4 MATERIALS The portland cement shall comply with the relevant requirements for Type GP, general purpose portland cement, given in AS 3972, and in addition, when subjected to an autoclave test as described hereafter, shall have a maximum expansion of 0.3%.

5 APPARATUS

5.1 Mixer The mixer shall consist of the following:

(a) A stainless steel mixing bowl with a capacity of approximately 5 L and of the general shape and size shown in Figure 1, provided with means by which it can be fixed securely to the mixer frame during mixing and by which the height of the bowl in relation to the mixer blade, and to some extent the gap between the blade and bowl, can be finely adjusted and fixed.

(b) A stainless steel mixer blade of the general shape, size and tolerance shown in Figure 2, revolving about its own axis as it is driven in a planetary movement around the axis of the bowl by an electric motor at controlled speeds. The two directions of rotation shall be opposite.

The gap between blade and bowl shown in Figure 1 shall be checked, using the flexible wedge gauge shown in Figure 2, and recorded every month.

The mixer shall operate at the speeds given in Table 5.1.