

IS : 6932 (Part IX) - 1973
(Reaffirmed 1995)

Indian Standard

METHODS OF TESTS FOR BUILDING LIMES

PART IX DETERMINATION OF SOUNDNESS

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METHODS OF TESTS FOR BUILDING LIMES

PART IX DETERMINATION OF SOUNDNESS

0. FOREWORD

0.1 This Indian Standard (Part IX) was adopted by the Indian Standards Institution on 22 March 1973, after the draft finalized by the Building Limes Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Hitherto, methods of tests for assessing qualitative requirements of building limes were included in IS : 712-1964. For facilitating the use of these tests it has been decided to print these tests as different parts of a separate Indian Standard. This part covers determination of soundness of building limes.

0.3 In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960*.

1. SCOPE

1.1 This standard (Part IX) covers the method of test for determination of soundness of building limes.

2. GENERAL

2.1 Preparation of the Sample — The sample shall be prepared in accordance with 7.3 of IS : 712-1973†.

2.2 The distilled water (*see* IS : 1070-1960‡) shall be used where use of water as a reagent is intended.

*Rules for rounding off numerical values (*revised*).

†Specification for building limes (*second revision*).

‡Specification for water, distilled quality (*revised*). (Since revised).

3. TEST FOR SOUNDNESS

3.1 Apparatus — The apparatus for conducting the ' Le-Chatelier ' test shall conform to IS : 5514 - 1969*.

3.2 Preparation of Sample for Test — A suitable amount of hydrated lime shall be mixed with one-third its mass of Portland cement (conforming to IS : 269-1967†) and 4 times its mass of standard sand (conforming to IS : 650-1971‡. The ingredients shall be mixed dry and then gauged and mixed with 12 percent by mass of water calculated on the dry mixture. It shall then be used for conducting the test.

3.3 Procedure — Three ' Le-Chatelier ' moulds shall be used for conducting the test. These shall be well greased internally. Each mould shall be placed upon a small non-porous plate and filled with the mortar under test, care being taken to keep the edges visibly open. The mould shall then be covered with another non-porous plate, upon which a small weight shall be placed. The 3 moulds shall be left undisturbed for 1 hour. At the expiration of this period the distance separating the indicator points shall be measured and these moulds transferred to a damp air cupboard for a period of 48 hours. They shall then be removed, with covers in place, from the damp air cupboard and placed in a suitable steam boiler, in which water is already boiling vigorously, and subjected to the continuous action of saturated steam at atmospheric pressure for a period of 3 hours; but it shall not be immersed in water. At the end of this period, the moulds shall be removed from the steam and allowed to cool and the distances between the indicator points again measured. The increase, if any, over the former measurement shall in no case exceed 10 mm after the deduction of 1 mm (to allow for the expansion of the added cement) from the measured expansion. The figure so obtained shall be recorded as the net expansion due to lime.

*Specification for apparatus used in ' Le-Chatelier ' test.

†Specification for ordinary, rapid-hardening and low heat Portland cement (second revision).

‡Specification for standard sand for testing of cement (second revision).

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