
Standard Method of Test for Resistance of Concrete to Chloride Ion Penetration

AASHTO Designation: T 259-02 (2021)

Technically Revised: 2002

Reviewed but Not Updated: 2021

Editorially Revised: 2021

Technical Subcommittee: 3c, Hardened Concrete



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1. SCOPE

- 1.1. This method covers the determination of the resistance of concrete specimens to the penetration of chloride ion. It is intended for use in determining the effects of variations in the properties of concrete on the resistance of the concrete to chloride ion penetration. Variations in the concrete may include, but are not limited to, changes in the cement type and content, water/cement ratio, aggregate type and proportions, admixtures, treatments, curing, and consolidation. This test method is not intended to provide a quantitative measure of the length of service that may be expected from a specific type of concrete.
- 1.2. The values stated in SI units are to be regarded as the preferred standard.
- 1.3. *The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*
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2. REFERENCED DOCUMENTS

- 2.1. AASHTO Standards:
- R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
 - R 39, Making and Curing Concrete Test Specimens in the Laboratory
 - T 160, Length Change of Hardened Hydraulic Cement Mortar and Concrete
 - T 260, Sampling and Testing for Chloride Ion in Concrete and Concrete Raw Materials
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3. TEST SPECIMENS

- 3.1. The specimens for use in this test shall be slabs made and cured in accordance with the applicable requirements of R 39.
- Note 1**—This method contemplates the use of a minimum of four specimens for each evaluation with each slab not less than 75 mm (3 in.) thick and a minimum surface area of 17 500 mm² (28 in.²).