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Testing methods for pervious concrete —

Part 1: Infiltration rate

Méthodes d'essai pour ciments perméables —

Partie 1: Taux d'infiltration

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Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 71, *Concrete, reinforced concrete and pre-stressed concrete*, Subcommittee SC 1, *Test methods for concrete*.

ISO 17785 consists of the following parts, under the general title *Testing methods for pervious concrete*:

— *Part 1: Infiltration rate*

Testing methods for pervious concrete —

Part 1:
Infiltration rate

1 Scope

This part of ISO 17785 specifies the procedure for testing the infiltration rate of hardened pervious concrete pavement specimens in the laboratory. It is not a method for measuring the permeability of pervious concrete. The specimens can either be prepared in the laboratory or cored from field placements, but not representing field conditions. This part of ISO 17785 also specifies procedures to make and cure hardened pervious concrete samples in the laboratory.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
infiltration rate
water flow rate per area per time through pervious concrete

2.2
pervious concrete
concrete which has interconnected voids that allow for water flow through them

Note 1 to entry: Pervious concrete for pavement is usually made with little or no fine aggregate and contains narrowly graded coarse aggregate typically with the nominal maximum size of 10 mm. The nominal size can be less or more, but the nominal maximum size is 25 mm.

2.3
pre-wet
wetting specimens before test representing field conditions with antecedent precipitation

Note 1 to entry: This pre-wet condition typically represents the condition of the minimum flow rate.

3 Symbols

k infiltration rate (mm/s)

W volume of infiltrated water (mm^3)

A cross-sectional area of specimen (mm^2)

t time required for measured volume of water to infiltrate the concrete (s)

4 Principle

The test specimens are pre-wetted before the test. A given amount of water is poured into the specimen and the time for the water to infiltrate is measured.