

Geotechnical investigation and testing - Geohydraulic testing - Part 5: Infiltrometer tests (ISO 22282-5:2012)

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NATIONAL FOREWORD

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.06.2012.	Date of Availability of the European standard is 01.06.2012.
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English Version

Geotechnical investigation and testing - Geohydraulic testing - Part 5: Infiltrometer tests (ISO 22282-5:2012)

Reconnaissance et essais géotechniques - Essais
géohydrauliques - Partie 5: Essais d'infiltromètres (ISO
22282-5:2012)

Geotechnische Erkundung und Untersuchung -
Geohydraulische Versuche - Teil 5: Infiltrometerversuche
(ISO 22282-5:2012)

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 22282-5:2012) has been prepared by Technical Committee CEN/TC 341 "Geotechnical Investigation and Testing", the secretariat of which is held by ELOT, in collaboration with Technical Committee ISO/TC 182 "Geotechnics".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2012, and conflicting national standards shall be withdrawn at the latest by December 2012.

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Geotechnical investigation and testing — Geohydraulic testing —

Part 5: Infiltrometer tests

1 Scope

This part of ISO 22282 establishes requirements for ground investigations by means of infiltrometer tests as part of geotechnical investigation services in accordance with EN 1997-1 and EN 1997-2.

It applies to the *in situ* determination of the water permeability of an existing geological formation or of treated or compacted materials.

The infiltrometer test is used to determine the infiltration capacity of the ground at the surface or shallow depth. It is a simple test for determining the permeability coefficient. The method can be applied using either steady-state or transient conditions, in saturated or unsaturated soils.

The principle of the test is based on the measurement of a surface vertical flow rate of water which infiltrates the soil under the influence of a positive hydraulic head.

Surface infiltration devices include single and double-ring infiltrometer designs of the open or closed type.

The measurement devices and measurement procedures are adapted to different ranges of permeability. Open systems are adapted to permeability ranges from 10^{-5} to 10^{-8} m/s and closed systems for permeability lower than 10^{-8} .

Depending on the environmental conditions and the water permeability of the soil, a duration of a few minutes to a few days is needed to run the test.

This part of ISO 22282 defines the terminology and the measured parameters. It specifies the required characteristics of the equipment, defines the procedures of the tests relating to the different measurement techniques and specifies the tests results.

It is applicable to:

- civil engineering projects;
- hydrogeology studies; and
- waste storage.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22282-1, *Geotechnical investigation and testing — Geohydraulic testing — Part 1: General rules*

ISO 22475-1, *Geotechnical investigation and testing — Sampling methods and groundwater measurements — Part 1: Technical principles for execution*