
**Geotechnical investigation and
testing — Identification and
classification of soil —**

**Part 1:
Identification and description**

*Reconnaissance et essais géotechniques — Identification et
classification des sols —*

Partie 1: Identification et description



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 182, *Geotechnics*.

This second edition cancels and replaces the first edition (ISO 14688-1:2002), which has been technically revised. It also incorporates the Amendment ISO 14688-1:2002/Amd 1:2013.

A list of all parts in the ISO 14688 series can be found on the ISO website.

Introduction

This document gives details of the procedures to be followed in the identification and description of soils. [Clauses 4](#) and [5](#) provide the rules for soil identification which are used at all stages of ground investigation and geotechnical design. [Clauses 6](#) and [7](#) give details of the procedures to be followed by those actually describing soils in the field or laboratory. This comprises the description of the soil material in all aspects and the description of the soil mass characteristics in terms of the bedding and discontinuities.

The level of detail in a description will depend on the characteristics of the soil, the size and quality of the soil exposure or sample, and the needs of the particular project. The person carrying out the field identification and description should be suitably qualified, skilled and experienced to make a correct and appropriate description and experienced in the geological materials involved in the investigation.

Practice in soil identification and description varies from country to country, in part reflecting significant differences in geological conditions. In addition, the quality of samples available for description vary due to the investigation methods employed, as methods of investigation have been developed in response to the ground conditions present.

Following identification and description, ISO 14688-2 gives the means by which soils can be classified into groups of similar composition and geotechnical properties based on the results of field and laboratory tests with respect to their suitability for geotechnical engineering purposes. Test results provide a means of checking the accuracy of the field or laboratory descriptions.

Geotechnical investigation and testing — Identification and classification of soil —

Part 1: Identification and description

1 Scope

This document specifies the rules for the identification and description of soils and is intended to be read in conjunction with ISO 14688-2, which outlines the basis of classification of those material characteristics most commonly used for soils for engineering purposes. The relevant characteristics could vary and therefore, for particular projects or materials, more detailed subdivisions of the descriptive and classification terms could be appropriate.

This document specifies procedures for the identification and description of soils based on a flexible system for use by experienced persons, covering both material and mass characteristics by visual and manual techniques. Details are given of the individual characteristics for identifying soils and the descriptive terms in regular use, including those related to the results of hand tests carried out in the field as part of the descriptive process.

This document is applicable to the description of soils for engineering purposes which can be those laid by natural processes, those laid by man or comprise synthetic materials.

NOTE 1 The identification and description of rocks are covered by ISO 14689-1. Identification and description of materials intermediate between soil and rocks are carried out using the procedures in this document, ISO 14688-2 and ISO 14689-1 as appropriate.

NOTE 2 The identification and classification of soil for pedological purposes, as well as in the framework of measurements for soil protection and for remediation of contaminated areas, is covered by ISO 25177.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 14688-2, *Geotechnical investigation and testing — Identification and classification of soil — Part 2: Principles for a classification*

ISO 14689-1, *Geotechnical investigation and testing — Identification and classification of rock — Part 1: Identification and description*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14688-2 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at www.iso.org/obp
- IEC Electropedia: available at www.electropedia.org