

**SLOVENSKI STANDARD
SIST EN ISO 14688-1:2004****01-januar-2004**

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Geotechnical investigation and testing - Identification and classification of soil - Part 1:
Identification and description (ISO 14688-1:2002)

Geotechnische Erkundung und Untersuchung - Benennung, Beschreibung und
Klassifizierung von Boden - Teil 1: Benennung und Beschreibung (ISO 14688-1:2002)

Recherches et essais géotechniques - Identification et classification des sols - Partie 1:
Identification et description (ISO 14688-1:2002)

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Ta slovenski standard je istoveten z: EN ISO 14688-1:2002

ICS:

13.080.05	Preiskava tal na splošno	Examination of soils in general
93.020	Zemeljska dela. Izkopavanja. Gradnja temeljev. Dela pod zemljo	Earthworks. Excavations. Foundation construction. Underground works

SIST EN ISO 14688-1:2004**en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 14688-1

August 2002

ICS 93.020

English version

Geotechnical investigation and testing - Identification and classification of soil - Part 1: Identification and description (ISO 14688-1:2002)

Recherches et essais géotechniques - Identification et classification des sols - Partie 1: Identification et description (ISO 14688-1:2002)

Geotechnische Erkundung und Untersuchung - Benennung, Beschreibung und Klassifizierung von Boden - Teil 1: Benennung und Beschreibung (ISO 14688-1:2002)

This European Standard was approved by CEN on 24 June 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 14688-1:2002 (E)

CORRECTED 2002-10-02

Foreword

This document (EN ISO 14688-1:2002) has been prepared by Technical Committee ISO/TC 182 "Geotechnics" in collaboration with Technical Committee CEN/TC 341 "Geotechnical Investigation and Testing", the secretariat of which is held by DIN.

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 February 2003, and conflicting national standards shall be withdrawn at the latest by February 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW **Endorsement notice** **(standards.iteh.ai)**

The text of ISO 14688-1:2002 has been approved by CEN as EN ISO 14688-1:2002 without any modifications.

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INTERNATIONAL STANDARD

ISO
14688-1

First edition
2002-08-15

Geotechnical investigation and testing — Identification and classification of soil — Part 1: Identification and description

*Recherches 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 14688 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14688-1 was prepared by Technical Committee ISO/TC 182, *Geotechnics*, Subcommittee SC 1, *Geotechnical investigation and testing*.

ISO 14688 consists of the following parts, under the general title *Geotechnical investigation and testing — Identification and classification of soil*:

- *Part 1: Identification and description* (standards.iteh.ai)
- *Part 2: Classification principles and quantification of descriptive characteristics*

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Geotechnical investigation and testing — Identification and classification of soil —

Part 1: Identification and description

1 Scope

This part of ISO 14688, together with ISO 14688-2, establishes the basic principles for the identification and classification of soils on the basis of those material and mass characteristics most commonly used for soils for engineering purposes. The relevant characteristics may vary and therefore, for particular projects or materials, more detailed subdivisions of the descriptive and classification terms may be appropriate.

The general identification and description of soils is based on a flexible system for immediate (field) 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 tests from the field.

This part of ISO 14688 is applicable to natural soils *in situ*, similar man-made materials *in situ* and soils redeposited by man. The identification and description of rocks is covered by ISO 14689.

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 11259.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 14688. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 14688 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 11259, *Soil quality — Simplified soil description*

ISO 14688-2, *Geotechnical investigation and testing — Identification and classification of soil — Part 2: Classification principles and quantification of descriptive characteristics*

ISO 14689, *Geotechnical investigation and testing — Identification and description of rock*

3 Terms and definitions

For the purposes of this part of ISO 14688, the following terms and definitions apply.

3.1 soil

assemblage of mineral particles and/or organic matter in the form of a deposit but sometimes of organic origin, which can be separated by gentle mechanical means and which includes variable amounts of water and air (and sometimes other gases)

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NOTE 1 The term is also applied to made ground consisting of replaced natural soil or man-made materials exhibiting similar behaviour, e. g. crushed rock, blast-furnace slag, fly-ash.

NOTE 2 Soils may have rock structures and textures may exist but soils are usually of lower strength than rocks.

3.2**identification of soil**

naming and description of a soil on the basis of its grading, type of material and characteristics of mineral and/or organic constituents and plasticity

3.3**geological structure**

variation in composition including bedding and discontinuities

3.4**discontinuities**

bedding planes, joints, fissures, faults and shear planes

3.5**organic matter**

matter consisting of plant and/or animal organic materials, and the conversion products of those materials, e.g. humus

NOTE Organic matter usually has a very high water content.

3.6**grading**

measure of the particle sizes of a soil and their distribution

3.7**fraction**

part of a soil that can be distinguished on the basis of defined particle sizes

3.8**plasticity**

property of a cohesive soil to change its mechanical behaviour with change of water content

3.9**volcanic soils**

pyroclastic materials produced and formed by explosive volcanic eruption; e.g. pumice, scoria, volcanic ash

4 Identification of soil**4.1 General**

Subclauses 4.2 to 4.10 give soil characteristics that generally permit soil to be identified with adequate accuracy for general (or preliminary) characterization. A more accurate identification and classification based on grading, plasticity or organic content can be achieved by laboratory tests. In addition to identifying soils, the condition in which a soil is encountered, any particular secondary constituents, other features of a soil, such as carbonate content, particle shape, surface roughness of particles, odour, any common names and the geological classification should all be indicated. For the identification and description, methods and additional tests shall be carried out according to clause 5. The identification and description of soils generally follows the flow chart in Figure 1.

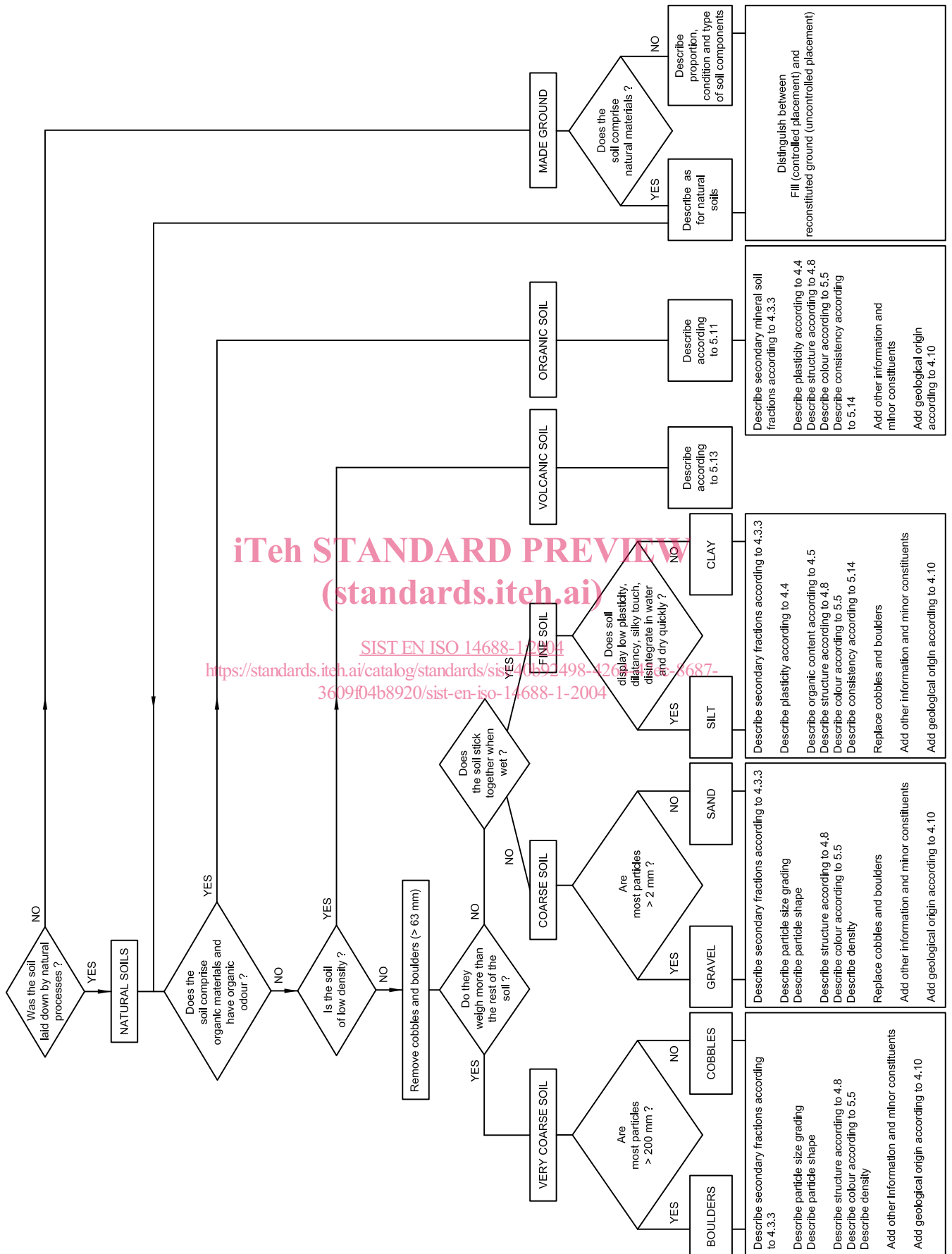


Figure 1 — Flow chart for the identification and description of soils