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

**Part 1:  
Identification and description**

*Recherches et essais géotechniques — Dénomination et classification  
des roches —*

*Partie 1: Dénomination et description*



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Published in Switzerland

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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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14689-1 was prepared by Technical Committee ISO/TC 182, *Geotechnics*, Subcommittee SC 1, *Geotechnical investigation and testing*.

ISO 14689 consists of the following parts, under the general title *Geotechnical investigation and testing — Identification and classification of rock*:

- *Part 1: Identification and description*
- *Part 2: Electronic exchange of data on identification and description of rock.*

## Introduction

This part of ISO 14689 covers areas in the international field that were never previously standardized. It is intended that this document presents broad good practice throughout the world and significant differences with national documents are not anticipated. A more detailed description of rock and related to the site and project is likely to be appropriate.

This document is based on international practice (see the Bibliography).

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# Geotechnical investigation and testing — Identification and classification of rock —

## Part 1: Identification and description

### 1 Scope

This part of ISO 14689 relates to the identification and description of rock material and mass on the basis of mineralogical composition, genetic aspects, structure, grain size, discontinuities and other parameters. It also provides rules for the description of other characteristics as well as for their designation.

This part of ISO 14689 applies to the description of rock for geotechnics and engineering geology in civil engineering. The description is carried out on cores and other samples of natural rock and on rock masses.

Rock mass classification systems using one or more descriptive parameters to suggest likely rock mass behaviour are beyond the scope of this part of ISO 14689 (see Bibliography).

Identification and classification of soil for engineering purposes is covered in ISO 14688-1 and ISO 14688-2.

### 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 710-1, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 1: General rules of representation*

ISO 710-2, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 2: Representation of sedimentary rocks*

ISO 710-3, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 3: Representation of magmatic rocks*

ISO 710-4, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 4: Representation of metamorphic rocks*

ISO 710-5, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 5: Representation of minerals*

ISO 710-6, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 6: Representation of contact rocks and rocks which have undergone metasomatic, pneumatolytic or hydrothermal transformation or transformation by weathering*

ISO 710-7, *Graphical symbols for use on detailed maps, plans and geological cross-sections — Part 7: Tectonic symbols*