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## Mixing water for concrete

*Eau de gâchage pour béton*



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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.

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ISO 12439 was prepared by Technical Committee ISO/TC 71, *Concrete, reinforced concrete and pre-stressed concrete*, Subcommittee SC 3, *Concrete production and execution of concrete structures*.

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## Introduction

The quality of the mixing water for production of concrete can influence the setting time, the strength development of concrete and the protection of the reinforcement against corrosion.

When assessing the suitability of water of unknown quality for the production of concrete, it is necessary to consider both the composition of the water and the application of the concrete being produced.

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# Mixing water for concrete

## 1 Scope

This International Standard specifies the requirements for water that is suitable for making concrete in accordance with ISO 22965 (all parts) and describes methods for assessing its suitability.

## 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 1920-3, *Testing of concrete — Part 3: Making and curing test specimens*

ISO 1920-4, *Testing of concrete — Part 4: Strength of hardened concrete*

ISO 7890-1, *Water quality — Determination of nitrate — Part 1: 2,6-Dimethylphenol spectrometric method*

ISO 29581-1, *Cement — Test methods — Part 1: Analysis by wet chemistry*

ISO 22965-1, *Concrete — Part 1: Methods of specifying and guidance for the specifier*

ISO 22965-2, *Concrete — Part 2: Specification of constituent materials, production of concrete and compliance of concrete*

## 3 Classification of types of water

### 3.1 General

In general, the suitability of water for the production of concrete depends upon its origin. The types given in 3.2 to 3.7 can be distinguished.

### 3.2 Potable water

This water is considered as suitable for use in concrete. Such water needs no testing.

### 3.3 Water recovered from processes in the concrete industry

This water, defined in A.2.1, is normally suitable for use in concrete, but shall be in accordance with the requirements of Annex A.

### 3.4 Water from underground sources

This water can be suitable for use in concrete, but shall be tested.