

Geotechnical investigation and testing - Laboratory
testing of soil - Part 12: Determination of liquid and
plastic limits (ISO 17892-12:2018)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 17892-12:2018 sisaldab Euroopa standardi EN ISO 17892-12:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 17892-12:2018 consists of the English text of the European standard EN ISO 17892-12:2018.
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.
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Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

Geotechnical investigation and testing - Laboratory testing
of soil - Part 12: Determination of liquid and plastic limits
(ISO 17892-12:2018)

Reconnaissance et essais géotechniques - Essais de
laboratoire sur les sols - Partie 12: Détermination des
limites de liquidité et de plasticité (ISO 17892-
12:2018)

Geotechnische Erkundung und Untersuchung -
Laborversuche an Bodenproben - Teil 12: Bestimmung
der Zustandsgrenzen (ISO 17892-12:2018)

This European Standard was approved by CEN on 15 June 2018.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 17892-12:2018) 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 BSI.

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of an identical text or by endorsement, at the latest by January 2019, and conflicting national standards shall be withdrawn at the latest by January 2019.

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

This document supersedes CEN ISO/TS 17892-12:2004.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 17892-12:2018 has been approved by CEN as EN ISO 17892-12:2018 without any modification.

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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).

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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 the European Committee for Standardization (CEN) Technical Committee CEN/TC 341 *Geotechnical investigation and testing*, in collaboration with ISO Technical Committee TC 182, *Geotechnics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 17892-12 cancels and replaces ISO/TS 17892-12:2004, which has been technically revised. It also incorporates ISO/TS 17892-12:2004/Cor.1:2006.

A list of all the parts in the ISO 17892 series can be found on the ISO website.

Introduction

This document covers areas in the international field of geotechnical engineering never previously standardised internationally. It is intended that this document presents broad good practice and significant differences with national documents is not anticipated. It is based on international practice (see Reference [1]).

Geotechnical investigation and testing — Laboratory testing of soil —

Part 12: Determination of liquid and plastic limits

1 Scope

This document specifies methods for the determination of the liquid and plastic limits of a soil. These comprise two of the Atterberg limits for soils.

The liquid limit is the water content at which a soil changes from the liquid to the plastic state.

This document describes the determination of the liquid limit of a specimen of natural soil, or of a specimen of soil from which material larger than about 0,4 mm has been removed. This document describes two methods: the fall cone method and the Casagrande method.

NOTE The fall cone method in this document should not be confused with that of ISO 17892-6.

The plastic limit of a soil is the water content at which a soil ceases to be plastic when dried further.

The determination of the plastic limit is normally made in conjunction with the determination of the liquid limit. It is recognized that the results of the test are subject to the judgement of the operator, and that some variability in results will occur.

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 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 14688-1, *Geotechnical investigation and testing — Identification and classification of soil — Part 1: Identification and description*

ISO 17892-1, *Geotechnical investigation and testing — Laboratory testing of soil — Part 1: Determination of water content*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

3.1

liquid limit

w_L

water content at which a soil passes from the liquid to the plastic state, as determined by the liquid limit test