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Medical gloves for single use - Part 1: Requirements and  
testing for freedom from holes

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 455-1:2020 sisaldab Euroopa standardi EN 455-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 455-1:2020 consists of the English text of the European standard EN 455-1:2020.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.05.2020.	Date of Availability of the European standard is 13.05.2020.
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English Version

## Medical gloves for single use - Part 1: Requirements and testing for freedom from holes

Gants médicaux non réutilisables - Partie 1 : Exigences  
et essais pour la détection de l'absence de trous

Medizinische Handschuhe zum einmaligen Gebrauch -  
Teil 1: Anforderungen und Prüfung auf Dichtheit

This European Standard was approved by CEN on 13 April 2020.

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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

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<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Terms and definitions</b> .....	<b>4</b>
<b>4 Requirement</b> .....	<b>4</b>
<b>5 Water tightness test for detection of holes</b> .....	<b>4</b>
5.1 Referee testing .....	4
5.2 Routine testing.....	5
<b>6 Sampling, inspection level and AQL</b> .....	<b>5</b>
<b>7 Test report</b> .....	<b>5</b>
<b>Annex A (informative) Guidance on relationship between this European Standard and the General Safety and Performance Requirements of Regulation (EU) 2017/745 [OJ L 117] aimed to be covered</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>8</b>

## European foreword

This document (EN 455-1:2020) has been prepared by Technical Committee CEN/TC 205 “Non-active medical devices”, 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 November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

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 EN 455-1:2000.

Compared to the previous edition the following main changes have been introduced:

- a) The term 3.1 “medical gloves for single-use” has been amended by a Note to entry;
- b) The term 3.2 “hole” has been added;
- c) In 5.1 the referee testing has been enhanced to cover the issue on extension of the glove when it is filled with water;
- d) In Clause 6 the first paragraph has been slightly changed to accommodate the EU commission rules for referencing ISO standards which are not available as EN standards;
- e) Due to that there is currently no standardization request by the EU commission for this part of EN 455 the harmonization process to provide presumption of conformity to the Medical Device Regulation (MDR) cannot be applied. However, to provide at least guidance on the relationship between this European Standard and the General Safety and Performance Requirements of Regulation (EU) 2017/745 [OJ L 117] aimed to be covered, an Annex A has been added.

EN 455 consists of the following parts under the general title “*Medical gloves for single use*”:

- Part 1: Requirements and testing for freedom from holes;
- Part 2: Requirements and testing for physical properties;
- Part 3: Requirements and testing for biological evaluation;
- Part 4: Requirements and testing for shelf life determination.

The following part is under development:

- Part 5: Extractable chemical residues.

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

## 1 Scope

This document specifies requirements and gives the test method for medical gloves for single use in order to determine freedom from holes.

## 2 Normative references

There are no normative references in this document.

## 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:

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

**3.1**  
**medical gloves for single use**  
gloves intended for use in the medical field to protect patient and user from cross-contamination, intended to be used on one individual during a single procedure

Note 1 to entry: Medical gloves labelled as single use are medical devices for single use according to the Medical Device Regulation (MDR). A single use medical device means a device that is intended to be used on one individual during a single procedure.

**3.2**  
**hole**  
defect of the glove which allows leakage of water

## 4 Requirement

Medical gloves for single use shall not leak when tested in accordance with Clause 5.

## 5 Water tightness test for detection of holes

### 5.1 Referee testing

Vertically position a filling tube of suitable dimensions to fit the glove such that the tube and the glove is capable of holding 1 000 ml of water. If, due to extension of the glove, the 1000 ml does not completely fill the glove, a means of ensuring that all parts of the glove are tested shall be devised and implemented. Any modified process should not influence the viability of detection of holes.

NOTE 1 For example, the glove can be clamped to restrict the flow of water sequentially until all parts of the glove have been tested for the required time interval.

NOTE 2 Suggested dimensions of the filling tube are shown in Figure 1.

Attach the glove to the filling tube, overlapping the cuff by a maximum of 40 mm over the end of the tube and secure it by suitable means to obtain a watertight seal without damaging the glove (see Figure 1).