

HINGAMISTEEDE KAITSEVAHENDID. OSAKESTE
FILTRID. NÕUDED, KATSETAMINE, MÄRGISTUS

Respiratory protective devices - Particle filters -
Requirements, testing, marking

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 143:2021 sisaldab Euroopa standardi EN 143:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 143:2021 consists of the English text of the European standard EN 143:2021.
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 and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.02.2021.	Date of Availability of the European standard is 24.02.2021.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.340.30

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele. Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis-ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis-ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Respiratory protective devices - Particle filters - Requirements, testing, marking

Appareils de protection respiratoire - Filtres à
particules - Exigences, essais, marquage

Atenschutzgeräte - Partikelfilter - Anforderungen,
Prüfung, Kennzeichnung

This European Standard was approved by CEN on 4 January 2021.

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

CEN members are the national standards bodies of 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 United Kingdom.



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

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

Contents

Page

European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms, definitions and symbols.....	4
3.1 Terms and definitions	4
3.2 Symbols.....	5
4 Classification.....	6
5 Designation.....	6
6 Requirements.....	7
6.1 General.....	7
6.2 Values and tolerances.....	7
6.3 Connection.....	7
6.4 Ergonomics.....	7
6.5 Mass.....	7
6.6 Twin or multiple filter devices.....	7
6.7 Design.....	8
6.8 Materials.....	8
6.9 Packaging.....	8
6.10 Conditioning.....	8
6.10.1 Temperature.....	8
6.10.2 Mechanical strength.....	8
6.11 Inhalation resistance	8
6.12 Filter penetration.....	9
7 Testing.....	9
7.1 Test performance.....	9
7.1.1 General.....	9
7.1.2 Test flow conditions.....	9
7.2 Test schedule	10
7.3 Inspection	11
7.4 Conditioning.....	11
7.4.1 Temperature.....	11
7.4.2 Mechanical strength.....	11
7.5 Inhalation resistance	12
8 Marking.....	13
8.1 General.....	13
8.2 Filters.....	13
8.3 Filter package	13
9 Information supplied by the manufacturer.....	14
Annex ZA (informative) Relationship between this European Standard and the essential health and safety requirements of Regulation 2016/425/EU [2016 OJ L81] aimed to be covered.....	15
Bibliography.....	17

European foreword

This document (EN 143:2021) has been prepared by Technical Committee CEN/TC 79 “Respiratory protective 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 August 2021, and conflicting national standards shall be withdrawn at the latest by August 2021.

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 143:2000, EN 143:2000/A1:2006 and EN 143:2000/AC:2005.

The following main technical changes have been made compared to EN 143:2000:

- a) definitions and symbols added;
- b) description deleted;
- c) nominal values and tolerances changed;
- d) use of a risk assessment, e.g. a Failure Modes and Effect Analysis (FMEA) added;
- e) twin filters added;
- f) clogging deleted;
- g) visual inspection changed to inspection and detailed list inserted;
- h) filter penetration test changed to refer to EN 13274-7;
- i) marking changed to filters in general;
- j) all figures adapted to the changes made in the test procedures, where appropriate.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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 particle filters for use as replaceable components in unassisted respiratory protective devices (RPD) with the exception of escape devices and filtering face pieces.

Laboratory tests are included for the assessment of compliance with the requirements.

Some filters complying with this document can also be suitable for use with other types of respiratory protective devices and/or escape devices. If so, they need to be tested and marked according to the appropriate European Standard.

This document does not cover requirements concerning respiratory hygiene. Requirements for decrease of the microbiological hazards caused by the growth of bacteria and viruses on the filtration material are not determined.

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.

EN ISO 16972:2020, *Respiratory protective devices - Vocabulary and graphical symbols (ISO 16972:2020)*

EN 134:1998, *Respiratory protective devices - Nomenclature of components*

EN 148-1:2018, *Respiratory protective devices - Threads for facepieces - Part 1: Standard thread connection*

EN 13274-3:2001, *Respiratory protective devices - Methods of test - Part 3: Determination of breathing resistance*

EN 13274-7:2019, *Respiratory protective devices - Methods of test - Part 7: Determination of particle filter penetration*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 16972:2020 and EN 134:1998 and the following 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/>

3.1.1

as received

not pre-conditioned or modified to carry out a test

[SOURCE: EN ISO 16972:2020, definition 3.16]