



SLOVENSKI STANDARD
SIST EN 143:2001/A1:2006
01-julij-2006

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

Atenschutzgeräte - Partikelfilter - Anforderungen, Prüfung, Kennzeichnung

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

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Ta slovenski standard je istoveten z: EN 143:2000/A1:2006

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ICS:

13.340.30

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en

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ICS 13.340.30

English Version

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

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

Atemschutzgeräte - Partikelfilter - Anforderungen, Prüfung,
Kennzeichnung

This amendment A1 modifies the European Standard EN 143:2000; it was approved by CEN on 27 April 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This document (EN 143:2000/A1:2006) has been prepared by Technical Committee CEN/TC 79 "Respiratory protective devices", the secretariat of which is held by DIN.

This Amendment to the European Standard EN 143:2000 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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 89/686/EEC, Annex II.

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

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The following amendments have been agreed on by CEN/TC 79 "Respiratory protective devices":

1 Contents

Re-number

8.7.3 as 8.7.4

Re-number

8.7.2 as 8.7.3

Add

8.7.2 Test Procedure

2 Normative references

Add

"EN 13274-5:2001, *Respiratory protective devices – Methods of test – Part 5: Climatic conditions*"

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3 Definitions

Add the following text to the end of the paragraph:

", together with the following:" [SIST EN 143:2001/A1:2006
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Add

"3.1

Re-usable filter

Filter intended to be used for more than a single shift"

5 Classification

Insert the following text as a new second paragraph:

"In addition, filters may be classified as single shift use only, or may be re-usable (more than one shift)."

6 Designation

Replace the text of the indented paragraph with the following:

— "particle filter EN 143, filter type, class, option e.g. particle filter EN 143 P3 NR"

7.12 Filter penetration

Replace the 2nd and 3rd paragraphs with the following text:

"For each aerosol, three filters shall be tested following mechanical strength according to 8.3 and temperature conditioning according 8.4.

Testing shall be done in accordance with 8.7.

Filters not meeting the requirement after storage shall be classified as single shift use only."

8.7 Filter penetration

Replace the text of 8.7.1 with the following:

"Two test aerosols are used for measurement of filter penetration;

- a) sodium Chloride, using the equipment described in 8.7.3
- b) paraffin Oil, using the equipment described in 8.7.4

The general procedure is described in 8.7.2 and applies for testing using either test aerosols.

NOTE Laboratories should give consideration to the following factors:

- The test chamber should be designed to minimise air velocity variations across the surface of the filter under test. Localised high air velocity ("jets") , may result in artificially high filter penetration.
- Paraffin oil used for testing should not have been exposed to heating and compressed air for a long period of time, as this may alter the composition of the oil, possibly causing inaccurate results.

- Replacement of paraffin oil in the test rig should be done every 3 months."

Delete

8.7.2.4

Delete

8.7.3.4

Re-number

8.7.3 as 8.7.4

Re-number

8.7.2 as 8.7.3

Insert a new 8.7.2 as follows:

8.7.2 Test procedure

The test aerosol is fed into the test chamber, where the filter under test is fixed. A flow of 95 l/min is passed through the filter and the aerosol concentration is measured immediately before and after the filter by the photometer.

Penetration shall be recorded throughout the test at sample intervals not exceeding 5 minutes.

- for filters being tested using paraffin oil, continue the test until the filter has been exposed to 120 mg of test aerosol.
- for filters being tested using sodium chloride, continue the test until the filter has been exposed to 120 mg of test aerosol, unless;
 - a) for single shift use filters, the penetration shows continued decline for 5 minutes or 5 sample intervals, whichever is the greater.
 - b) for re-useable filters, the penetration shows continued decline for 5 minutes or 5 sample intervals, whichever is the greater, and the maximum penetration is lower than when tested using paraffin oil test aerosol.

NOTE Continuous recording of penetration is recommended.

If these conditions are met, the exposure test may be terminated early.

Report the maximum penetration during exposure.

For re-usable filters, immediately continue testing as follows, but in the case of re-usable filters for which the sodium chloride test was terminated before full 120 mg exposure, further testing need only be performed using paraffin oil test aerosol.

Remove the filter from the penetration test chamber and store the filter in accordance with EN 13274-5, for a duration of (24 ± 1) hours under ambient conditions as described in 3.1 of EN 13274-5:2001, ensuring that filters are not in contact with each other.

Remove the filter from storage and return it to the penetration test chamber.

Pass the test aerosol (the same aerosol used for the 120 mg exposure test) through the filter at a flow of 95 l/min.

Determine the penetration measured as the average over a time of (30 ± 3) s, 3 min after the start of the test. Report this as the penetration after storage.”

9.2 Encapsulated filters

Replace 1st paragraph of a) with the following and rename the other points accordingly.

- a) “appropriate filter type and class (P1, P2 or P3), and white colour code followed by:
- b) "NR" if the filter is limited to single shift use only: "Example: EN 143:2000 P3 NR" or
- c) "R" if the filter is re-usable **respectively**: Example: EN 143:2000 P2 R"

9.3 Unencapsulated filters

Replace a) with the following and rename b) to d).

- a) the appropriate filter type and class (P1, P2 or P3), and white colour code followed by:
- b) “NR” if the filter is limited to single shift use only: "Example: EN 143:2000 P3 NR" or
- c) “R” if the filter is re-usable **respectively**: Example: EN 143:2000 P2 R"

9.4 Filter package

Replace a) with the following and rename the other points accordingly.

- a) the appropriate filter type and class (P1, P2 or P3), and white colour code followed by:
- b) "NR" if the filter is limited to single shift use only: "Example: EN 143:2000 P3 NR" or
- c) "R" if the filter is re-usable **respectively**: Example: EN 143:2000 P2 R"

10 Information supplied by the manufacturer

Replace f) as g) and insert the following:

"f) for single-shift use filters (marked "NR"), a warning shall be given that the device shall not be used for more than one shift."

Table 3 — Summary of requirements and tests

Replace the details in the row for "Filter Penetration" with the following:

Filter Penetration	7.12	3 (for each aerosol)	M.S. + TC:	8.7
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Annex ZA

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Replace the current Annex ZA by the following:

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