

SLOVENSKI STANDARD

SIST EN 12941:1999/A2:2009

01-januar-2009

CdfYa UnUj Ufcj UbYX\ U'!NUy JbU YUXUUJ_ Udi WUg'hU bc'ZfUW'c'nfU_U!
NU hYj YZdfYg_i yUbYZcnbU Yj UbY

Respiratory protective devices - Powered filtering devices incorporating a helmet or a hood - Requirements, testing, marking

Atemschutzgeräte - Gebläsefiltergeräte mit einem Helm oder einer Haube - Anforderungen, Prüfung, Kennzeichnung

Appareils de protection respiratoire - Appareils filtrants à ventilation assistée avec casque ou cagoule - Exigences, essais, marquage

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Ta slovenski standard je istoveten z: EN 12941:1998/A2:2008

ICS:

13.340.30 Varovalne dihalne naprave Respiratory protective devices

SIST EN 12941:1999/A2:2009

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12941:1998/A2

November 2008

ICS 13.340.30

English Version

**Respiratory protective devices - Powered filtering devices
incorporating a helmet or a hood - Requirements, testing,
marking**

Appareils de protection respiratoire - Appareils filtrants à
ventilation assistée avec casque ou cagoule - Exigences,
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oder einer Haube - Anforderungen, Prüfung,
Kennzeichnung

This amendment A2 modifies the European Standard EN 12941:1998; it was approved by CEN on 25 September 2008.

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

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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 12941:1998/A2:2008) 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 May 2009 and conflicting national standards shall be withdrawn at the latest by May 2009.

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 organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, 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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EN 12941:1998/A2:2008 (E)**1 Modification to Clause 2 (Normative references)**

Replace "prEN 132:1996" with "EN 132".

Replace "EN 134:1998" with "EN 134".

Replace "EN 136:1998" with "EN 136".

Replace "EN 140:1998" with "EN 140".

Replace "prEN 143:1997" with "EN 143".

Replace "EN 148-1:1987" with "EN 148-1".

Replace "EN 166:1995" with "EN 166".

Replace "EN 169:1992" with "EN 169".

Replace "EN 170:1992" with "EN 170".

Replace "EN 171:1992" with "EN 171".

Replace "EN 379:1994 Specification for welding filters with switchable luminous transmittance and welding filters with dual luminous transmittance" with "EN 379 Personal eye-protection – Automatic welding filters".

Replace "EN 397:1994" with "EN 397".

Add "EN 13274-7 Respiratory protective devices – Methods of test – Part 7: Determination of particle filter penetration".

Replace "EN ISO 6941:1995" with "EN ISO 6941".

Replace "EN 50014:1992" with "EN 60079-0" in Clause 2 and 6.9, 2nd paragraph. Replace the title with "Electrical apparatus for explosive gas atmospheres – Part 0: General requirements (IEC 60079-0:2004, modified)".

Replace "EN 50020:1994" with "EN 60079-11" in Clause 2, 6.9, 2nd paragraph and 8.3 c). Replace the title with "Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i" (IEC 60079-11:2006)".

Replace "IEC 651:1979" with "EN 61672 (all parts)" in Clause 2 and 7.13.2.2. Replace the title with "Electroacoustics – Sound level meters".

2 Modification to 3.1 (Definitions)

Add:

"3.1.2 Re-usable particle or combined filter:

a particle or combined filter intended to be used for more than a single shift."

3 Modification to 3.2 (Description)

In a), delete "pr" before "EN 132".

4 Modification to 4 (Designation)

2nd paragraph, replace text with "Powered filtering device EN 12941, class, type, particle filter re-usability, options".

3rd paragraph, replace "for example:" with "examples:".

Replace the current example with "Powered filtering device EN 12941 TH2A2P R SL;"

Add a second example "Powered filtering device EN 12941 TH2P NR S.".

5 Modification to 6.11.2.4.1 (Particle filters)

Following the last paragraph starting "Filters only....", add a new paragraph "Filters not meeting the requirements after the storage test of EN 13274-7 shall be classified as single shift use only.".

Move the existing 2nd paragraph to the end of the clause.

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6 Modification to Table 6 (Testing schedule)

Row concerning "Requirement clause" 6.4 "Inward leakage", add in column 5 "7.5" and in column 6 "6.3.3.4".

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Replace the row for 6.11 with the following: "

6.11	Filters	3 filters/ aerosol	3M.S. & T.C.	7.1.2, 7.2, 7.11, 7.12	
		4 filters/ gas	2M.S., 2M.S. & T.C.	7.1.2, 7.2, 7.11, 7.12	

".

7 Modification to 7.1.3 (Filters)

Replace title of 7.1.3.1 with "Aerosol penetration".

Replace text of 7.1.3.1 with the following:

"Three filters shall be tested for each aerosol. The filters shall be subjected to conditioning as described in 7.1.2, and then to mechanical strength testing as described in 7.11, prior to aerosol testing.

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The filters shall remain in their smallest packaging or seal during conditioning and then all packaging and seals shall be removed prior to aerosol testing."

Add the following new subclause:

"7.1.3.2 Gas capacity

Four filters shall be tested for each gas. Two filters "as received" shall be subjected to the mechanical strength conditioning as described in 7.11 prior to gas testing. The two further filters shall be subjected to conditioning as described in 7.1.2, and then to mechanical strength testing as described in 7.11, prior to gas testing.

The filters shall remain in their smallest packaging or seal during conditioning and then all packaging and seals shall be removed prior to gas testing."

Replace clause number of current "7.1.3.2" with "7.1.3.3".

8 Modification to 7.8 (Clogging)

In the final paragraph, replace ", except that conditioning is not required." with:

", except:

- the conditioning specified by 7.12.2 is not required;
- only the Penetration test of EN 13274-7 shall be performed."

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9 Modification to 7.12.1 (General)

Replace the text of the 2nd paragraph with the following:

"Three filters shall be tested for each aerosol. The filters shall be subjected to conditioning as described in 7.1.2, and then to mechanical strength testing as described in 7.11, prior to aerosol testing.

Four filters shall be tested for each gas. Two filters shall be subjected to the mechanical strength testing as described in 7.11 prior to gas testing. The two further filters shall be subjected to conditioning as described in 7.1.2, and then to mechanical strength testing as described in 7.11, prior to gas testing.

The filters shall remain in their smallest packaging or seal during conditioning and then all packaging and seals shall be removed prior to aerosol or gas testing."

10 Modification to 7.12.2 (Particle filter efficiency)

Replace the 2nd paragraph with the following:

"Filters shall be tested using the penetration and exposure tests, and if re-usable the storage test, described in EN 13274-7 after conditioning in accordance with 7.11, except:

- the test flow rate shall be that defined in 7.12.1;

- for the exposure test, the specified mass of test aerosol shall be calculated as follows:

$$\text{Exposure per filter (mg)} = (C \times Q \times t)$$

where

C (mg/m³) is the concentration in the working environment fixed at 8 mg/m³;

Q (m³/h) is the initial flow rate determined according to 7.12.1, divided by the number of filters fitted per device;

t (h) is the duration in the working environment fixed at 8 h.

- where the paraffin oil filter penetration test is used the aerosol concentration shall be (20 ± 10) mg/m³."

11 Modification to 8.4.2 (Particle filters)

Replace the first paragraph with the following:

"In addition to 8.4.1, the filter shall be marked:

- "NR" if the filter is limited to single shift use only, or
- "R" if the filter is re-usable.

The marking of "NR" or "R" shall follow the marking of "P", separated by a single space."

Add "Also, " to the start of the 2nd paragraph.

Add a new final paragraph:

"If the marking "S" or "SL" is used, it shall follow the "R" or "NR" marking separated by a single space."

12 Modification to 8.5 (Filter or filter package)

Replace a) with the following:

"a) the appropriate filter type and colour code, particle filter re-usability and option as given in 8.4.1, 8.4.2 and 8.4.3,".

13 Modification to 9.2 (Filters)

Replace the whole text with the following:

"The smallest commercially available packaging shall include information relevant to the filters, as follows:

- information given in 9.1.3;
- application;