SLOVENSKI STANDARD

SIST EN 14387:2004+A1:2008

01-maj-2008

Oprema za varovanje dihal - Filter(-ri) za pline in kombinirani filter(-ri) - Zahteve, preskuġanje, oznaļ evanje

Respiratory protective devices - Gas filter(s) and combined filter(s) - Requirements, testing, marking

Atemschutzgeräte - Gasfilter und Kombinationsfilter - Anforderungen, Prüfung, Kennzeichnung

Appareils de protection respiratoire - Filtres anti-gaz et filtres combinés - Exigences, essais, marquage

Ta slovenski standard je istoveten z: **EN 14387:2004+A1:2008**

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English Version

Respiratory protective devices - Gas filter(s) and combined filter(s) - Requirements, testing, marking

Appareils de protection respiratoire - Filtres anti-gaz et filtres combinés - Exigences, essais, marquage

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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 Management Centre has the same status as the official versions.

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Contents

Foreword

This document (EN 14387:2004+A1:2008) 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of an identical text or by endorsement, at the latest by July 2007 and conflicting national standards shall be withdrawn at the latest by July 2007.

This document includes Amendment 1, approved by CEN on 2007-12-05.

This document supersedes [A1] EN 14387:2004 [A1].

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] [A1].

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags [AC] [AC].

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.

Introduction

A given respiratory protective device can only be approved when the individual components satisfy the requirements of the test specification which may be a complete standard or part of a standard and practical performance tests have been carried out successfully on complete apparatus where specified in the appropriate standard. If for any reason a complete apparatus is not tested then simulation of the apparatus is permitted provided the respiratory characteristics and mass distribution are similar to those of the complete apparatus.

1 Scope

This European Standard refers to gas filters and combined filters for use as components in unassisted respiratory protective devices.

Filters for use against CO are excluded from this standard.

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

Some filters complying with this standard can also be suitable for use with assisted respiratory protective devices and if so they need to be tested be tested and marked according to the appropriate European Standard.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 132:1998, *Respiratory protective devices – Definitions of terms and pictograms.*

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

EN 143, *Respiratory protective devices – Particle Filters - Requirements, testing, marking.*

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

EN 148-2, *Respiratory protective devices – Threads for facepieces – Part 2: Centre thread connection.*

EN 148-3, *Respiratory protective devices – Threads for facepieces – Part 3: Thread connection M 45 x 3.*

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

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

[A1] EN 13274-7:2008, *Respiratory protective devices – Methods of test – Part 7: Determination of particle filter penetration.* [A1]

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 132:1998 [A1], [A1] EN 134:1998 [A1] and the following [A1] apply.

[A1] **3.1**
re-useable combined filter
combined filter intended to be used for more than a single shift [A1]

4 Description

Air enters the gas or combined filter(s) and passes to the facepiece after removal of gases and vapours or gases, vapours and particles.

5 Classification

5.1 Types of filters

5.1.1 Gas filters

Gas filters are produced in one of the following types: Types A, B, E, K, AX and SX.

— **Type A**

For use against certain organic gases and vapours with a boiling point > 65 °C as specified by the manufacturer.

— **Type B**

For use against certain inorganic gases and vapours as specified by the manufacturer.

— **Type E**

For use against sulphur dioxide and other acidic gases and vapours as specified by the manufacturer.

— **Type K**

For use against ammonia and organic ammonia derivatives as specified by the manufacturer.

— **Type AX**

For use against certain organic gases and vapours with a boiling point ≤ 65 °C as specified by the manufacturer. For single use only.

— **Type SX**

For use against specific named gases and vapours as specified by the manufacturer.

5.1.2 Multi-type gas filters

Filters which are a combination of two or more of the above types excluding type SX and which meet the requirements of each type separately.

5.1.3 Combined filters

Gas or multi-type gas filters incorporating a particle filter according to EN 143.

5.1.4 Special filters

Special filters are:

— **Type NOP3**

For use against nitrogen oxides, e.g. NO, NO_2, NO_X.

— **Type HgP3**

For use against mercury.

These filters shall always incorporate a P3 filter according to EN 143 and may be combined with each other and/or types specified under 5.1.1 except for type SX.

5.2 Classes of filters

Gas filters of types A, B, E and K are classified in terms of capacity as follows:

— Class 1 low capacity filters;

— Class 2 medium capacity filters;

— Class 3 high capacity filters.

The protection provided by a class 2 or class 3 filter includes that provided by the corresponding filter of lower class or classes.

The classification of combined filter(s) includes that of particle filter(s) according to EN 143.

Type AX and type SX gas filters and special filters are not classified.

6 Requirements

6.1 General

In all tests, all test samples shall meet the requirements.

6.2 Ergonomics

The requirements of this standard are intended to take account of the interaction between the wearer, the respiratory protective device, and where possible the working environment in which the respiratory protective device is likely to be used. See annex ZA.

6.3 Design

The filter shall be sufficiently robust to withstand the rough usage it is likely to receive in service.

No part of the filter likely to be in contact with the wearer shall have sharp edges or burrs.

The filter shall be designed to ensure its full function in any orientation.

Testing shall be done in accordance with 7.3.

6.4 Materials

The filter shall be made of suitable material to withstand normal usage and exposures to those temperatures, humidity and corrosive environments that are likely to be encountered. Internally it shall withstand corrosion by the filtering media.

Any material of the filter media or any gaseous products that may be released by the air flow through the filter shall not be known to constitute a hazard or nuisance for the wearer.

Testing shall be done in accordance with 7.3.

6.5 Mass

The maximum mass of filter(s) designated to be used directly connected to a half mask is 300 g.

The maximum mass of filter(s) designated to be used directly connected to a full face mask is 500 g.

Testing shall be done in accordance with 7.1.

6.6 Connection

The connection between filter(s) and facepiece or other device(s) with which it is intended to be used shall be robust and leaktight.

The connection between filter and facepiece may be achieved by a permanent or special connector or a screw thread including a thread conforming to EN 148-1.

Threads conforming to EN 148-2 or EN 148-3 shall not be used.

If the filter is designated to be used on a multiple filter facepiece or has any other thread, it shall not be possible to connect it to a thread conforming to EN 148-1, EN 148-2 or EN 148-3.

The filter shall be readily replaceable without use of special tools and shall be designed or marked to prevent incorrect assembly.

The particle filter of combined filters shall be on the influent side of the gas filter.

Testing shall be done in accordance with 7.3.

6.7 Multiple filters

Where respirators are designed to use more than one filter (i.e. multiple filter device), through which the flow is proportioned, all requirements given in this European Standard are to be met by the complete set of filters (e.g. the total mass of a filter set designated to be used directly connected to a half mask shall not exceed 300 g).

If, however, it is possible that a single filter of a multiple filter device may be used alone, then the requirements of the full flow rate for the tests, as stated in this European standard, shall be met.

In the information supplied by the manufacturer all necessary information on how to use multiple filters shall be given.

Testing shall be done in accordance with 7.1 and 7.3.

6.8 Packaging

Filters shall be offered for sale packaged in such a way that they are protected against mechanical damage or visible contamination before use.

Where appropriate, filters shall be factory sealed to protect the filter media against environmental influences in such a way that the breaking of the factory sealing can be identified.

Testing shall be done in accordance with 7.3.