



SLOVENSKI STANDARD

SIST EN 371:1996

01-april-1996

Oprema za varovanje dihal - Filtri AX in kombinirani filtri za organske spojine z nizkim vreliščem - Zahteve, preskušanje, označevanje

Respiratory protective devices - AX gas filters and combined filters against low boiling organic compounds - Requirements, testing, marking

Atenschutzgeräte - AX Gasfilter und Kombinationsfilter gegen niedrigsiedende organische Verbindungen - Anforderungen, Prüfung, Kennzeichnung

Appareils de protection respiratoire - Filtres anti-gaz AX et filtres combinés contre les composés organiques a bas point d'ébullition - Exigences, essais, marquage

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Ta slovenski standard je istoveten z: **EN 371:1992**

ICS:

13.340.30	Varovalne dihalne naprave	Respiratory protective devices
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EUROPEAN STANDARD

EN 371:1992

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 1992

UDC 614.894.2:620.1:614.8

Descriptors: Accident prevention, personal protective equipment, air filters, classifications, specifications, tests, marking

English version

Respiratory protective devices - AX gas filters and combined filters against low boiling organic compounds - Requirements, testing, marking

Appareils de protection respiratoire - Filtrés anti-gaz AX et filtres combinés contre les composés à bas point d'ébullition - Exigences, essais, marquage

Atenschutzgeräte - AX Gasfilter und Kombinationsfilter gegen niedrigrisiedende organische Verbindungen - Anforderungen, Prüfung, Kennzeichnung

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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 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard was drawn up by CEN/TC 79 "Respiratory protective devices", the secretariat of which is held by DIN.

The work was allocated to Sub-Group 4 (SG 4) "Filters and absorption devices" with the Finish Standardization Institute (SFS) as secretariat.

The draft was circulated in June 1990 to all CEN Members. As a result of this enquiry, 16 members approved the document while 2 did not vote.

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The comments received were considered for the revision of the draft. CEN/TC 79 finally decided to proceed with the formal vote and the document was finally adopted

on 91-11-07.

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In accordance with the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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 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 weight distribution are similar to those of the complete apparatus.

1 Scope

This European Standard refers to gas filters and combined filters against low boiling organic compounds, as specified in 4, for use as components in unassisted respiratory protective devices, with the exception of escape apparatus and filtering facepieces. It specifies minimum requirements for these filters for use as part of respiratory protective devices.

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

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 here after. 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.

- EN 143 Respiratory protective devices; Particle filters;
Requirements, testing, marking
- EN 148-1 Respiratory protective devices;
Threads for facepieces; Standard thread connection

3 Definition and description

Gas filters remove specified gases and vapours.

Combined filters remove dispersed solid and/or liquid particles, and specified gases and vapours.

Low boiling organic compounds according to this standard are components with a boiling point of ≤ 65 °C.

4 Classification

AX filters for use against certain low boiling organic compounds, as specified by the manufacturer, are classified in only one type and class: Type AX.

Combined filters for use against certain low boiling organic compounds, as specified by the manufacturer, and particles are classified according to their particle filtration efficiency: Types AXP1, AXP2 and AXP3.

5 Requirements

5.1 General

If the gas filter is combined with a particle filter, the combined filter shall meet the penetration requirement for the particle filter as described in EN 143 in addition to the requirements described below.

The connection between filter(s) and facepiece shall be robust and leak tight.

The connection between filter and facepiece may be achieved by a permanent or special type of connection or by a screw thread connection (including threads other than standard threads). If a standard thread is used it shall be in accordance with EN 148-1. If the filter is a twin-filter designated to be used with a twin filter facepiece, it shall not be possible to connect it to the standard thread connector.

The filter shall be readily replaceable without use of 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.

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

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

5.2 Materials

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

Material released by the air flow through the filter shall not be known to be likely to constitute a hazard or nuisance for the wearer.

5.3 Mechanical strength

Before testing for breathing resistance and protection capacity the filters shall be subjected to a test in accordance with 6.2 simulating rough usage of the filters.

After this treatment the filters shall show no mechanical defects and shall meet the requirements for breathing resistance and protection capacity.

5.4 Breathing resistance

The resistance imposed by filter(s) to the flow of air shall be as low as possible and in no case exceed the maximum figures shown in table 1 when tested in accordance with 6.3.

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Table 1 - Maximum breathing resistance

Filter type	Maximum resistance (mbar)*	
	at 30 l/min	at 95 l/min
AX	1,4	5,6
AXP1	2,0	7,7
AXP2	2,1	8,0
AXP3	2,6	9,8

* 1 mbar = 100 N/m² = 100 Pa

5.5 Protection capacity

When tested in accordance with 6.4 filters of the type AX shall meet the requirements of table 2.

Table 2 - Minimum breakthrough time of AX filters

Filter type	Test gas	Minimum capacity at test condition (g)	Minimum breakthrough time at test condition (min)
AX	Dimethylether CH ₃ OCH ₃	1,43	50
	Isobutane C ₄ H ₁₀	9,0	50

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Note: The minimum breakthrough time given in table 2 is intended only for laboratory tests under standardized conditions. It does not give an indication of the possible service time of the filter in practical use. Possible service times can differ from the breakthrough times determined according to this standard in both directions, positive or negative, depending on the conditions of use.