

Hingamisteede kaitsevahendid. Sissehingamisventiilita, eraldatavate filtritega poolmaskid kaitseks gaaside või gaaside ja osakeste või ainult osakeste eest. Nõuded, katsetamine, märgistus

Respiratory protective devices - Half masks without inhalation valves and with separable filters to protect against gases or gases and particles or particles only - Requirements, testing, marking

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1827:1999+A1:2009 sisaldab Euroopa standardi EN 1827:1999+A1:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 10.06.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 1827:1999+A1:2009 consists of the English text of the European standard EN 1827:1999+A1:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 10.06.2009.

The standard is available from Estonian standardisation organisation.

ICS 13.340.30

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

English Version

Respiratory protective devices - Half masks without inhalation valves and with separable filters to protect against gases or gases and particles or particles only - Requirements, testing, marking

Appareils de protection respiratoire - Demi-masques sans soupape inspiratoire et avec filtres démontables, contre les gaz, contre les gaz et les particules, ou contre les particules uniquement - Exigences, essais, marquage

Atemschutzgeräte - Halbmasken ohne Einatemventile und mit trennbaren Filtern zum Schutz gegen Gase, Gase und Partikeln oder nur Partikeln - Anforderungen, Prüfung, Kennzeichnung

This European Standard was approved by CEN on 26 December 1998 and includes Amendment 1 approved by CEN on 1st May 2009.

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 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 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.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Foreword	3	9 Marking	38
Introduction	4	9.1 Packaging	38
1 Scope	4	9.2 Half mask	39
2 Normative references	4	9.3 Filters	39
3 Terms and definitions	5	10 Information supplied by the manufacturer	40
4 Description	5	Table 8 - Summary of requirements and tests	41
5 Classification	5	Annex A (informative) Marking	43
6 Designation	6	Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	44
7 Requirements	6		
7.1 General	6		
7.2 Nominal values and tolerances	7		
7.3 Visual inspection	7		
7.4 Materials	7		
7.5 Flammability	7		
7.6 Cleaning and disinfecting	7		
7.7 Filter material	7		
7.8 Finish of parts	7		
7.9 Demountable parts	7		
7.10 Head harness	8		
7.11 Connections	8		
7.12 Exhalation valves	8		
7.13 Packaging	8		
7.14 Mass	9		
7.15 Gas filter capacity	9		
7.16 Particle filter penetration	11		
7.17 Clogging (Optional)	11		
7.18 Compatibility with skin	12		
7.19 Carbon dioxide content of inhalation air	12		
7.20 Breathing resistance without clogging	13		
7.21 Inward leakage	15		
7.22 Field of vision	15		
7.23 Practical performance	15		
8 Testing	15		
8.1 General	15		
8.2 Conditioning	15		
8.3 Visual inspection	18		
8.4 Flammability	18		
8.5 Cleaning and disinfecting	19		
8.6 Exhalation valves (if fitted)	19		
8.7 Gas filter capacity	21		
8.8 Particle filter penetration	21		
8.9 Clogging	21		
8.10 Carbon dioxide content of inhalation air	21		
8.11 Breathing resistance	25		
8.12 Inward leakage	26		
8.13 Practical performance	36		



Foreword

This document (EN 1827:1999+A1:2009) 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 December 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This European Standard supersedes EN 1827:1999.

This document includes Amendment 1, approved by CEN on 2009-05-01.

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

This European Standard 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 standard.

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 the 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 weight distribution are similar to those of the complete apparatus.

1 Scope

This European Standard specifies performance requirements, test methods and marking requirements for half masks (re-usable) without inhalation valves and with separable filters (designed for a maximum of single shift use) to protect against gases or gases and particles or particles only. It does not cover devices designed for use in circumstances where there is or might be an oxygen deficiency (oxygen less than 17 % by volume) or for escape purposes.

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

2 Normative references

A1 The following referenced documents are indispensable for the application 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. **A1**

EN 132 Respiratory protective devices – Definitions of terms and pictograms

EN 134 Respiratory protective devices – Nomenclature of components

A1 *deleted text* **A1**

A1 EN 143 **A1** 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

A1 EN 149 **A1** Respiratory protective devices – Filtering half masks to protect against particles – Requirements, testing, marking

A1 *deleted text* **A1**

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

A1 EN 14387:2004, Respiratory protective devices – Gas filter(s) and combined filter(s) - Requirements, testing, marking **A1**

ISO 6941 Textile fabrics — Burning behaviour — Measurement of flame spread properties of vertically oriented specimens

3 Terms and definitions

For the purposes of this European Standard the definitions in EN 132 and the nomenclature from EN 134 apply.

Gas filters remove specified gases. Combined filters remove dispersed solid and/or liquid particles and specified gases. The term "gases" is taken to include vapours.

Particle filters remove solid and/or liquid particles.

A solid aerosol is defined as a dispersion of solid particles in air. A liquid aerosol is defined as a dispersion of liquid particles in air.

4 Description

A half mask without inhalation valves covers the nose and mouth and the chin, has no inhalation valves and may or may not have exhalation valves. It comprises a facepiece and separable and replaceable filters. It provides adequate sealing for the intended use on the face of the wearer against the ambient atmosphere, when the skin is dry or moist and when the head is moved.

Inhalation air enters through the filter and passes directly to the nose and mouth area of the device. Exhaled air passes through the filter and an exhalation valve (if fitted) to the ambient atmosphere.

In addition to providing protection against gases these devices can be designed to protect against both solid and liquid aerosols.

5 Classification

5.1 General

Half masks shall be classified according to the types and classes of filters used.

5.2 Filter types

Type FM A - for use against certain organic gases and vapours with a boiling point higher than 65 °C as specified by the manufacturer.

Type FM B - for use against certain inorganic gases and vapours as specified by the manufacturer (excluding carbon monoxide).

Type FM E - for use against sulfur dioxide and other acid gases and vapours as specified by the manufacturer.

Type FM K - for use against ammonia and organic ammonia derivatives as specified by the manufacturer.