SLOVENSKI STANDARD
SIST EN 13274-2:2019

01-oktober-2019

Nadomešča:
SIST EN 13274-2:2001

Oprema za varovanje dihal - Metode preskušanja - 2. del: Praktični preskusi zmogljivosti

Respiratory protective devices - Methods of test - Part 2: Practical performance tests

Atemschutzgeräte - Prüfverfahren - Teil 2: Praktische Leistungsprüfungen

Appareils de protection respiratoire - Méthodes d'essai - Partie 2: Essais pratiques de performance

Ta slovenski standard je istoveten z: **EN 13274-2:2019**

ICS:

13.340.30	Varovalne dihalne naprave	Respiratory protective devices

SIST EN 13274-2:2019 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13274-2

August 2019

ICS 13.340.30

Supersedes EN 13274-2:2001

English Version

Respiratory protective devices - Methods of test - Part 2: Practical performance tests

Appareils de protection respiratoire - Méthodes d'essai - Partie 2 : Essais pratiques de performance

Atemschutzgeräte - Prüfverfahren - Teil 2: Praktische Leistungsprüfungen

This European Standard was approved by CEN on 17 June 2019.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword

This document (EN 13274-2:2019) 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 February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13274-2:2001.

The following main technical changes have been made compared to EN 13274-2:2001:

a) Clause 4 amended to include relevant test conditions and the activity sequence;

b) Clause 5 amended regarding the estimation of uncertainty;

c) data for test subjects added;

d) assessment of practical performance amended;

e) test report added;

f) activities for practical performance tests more specified and amended.

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

Introduction

This document is intended as a supplement to the specific device standards for respiratory protective devices. Test methods are specified for complete or parts of devices. If deviations from the test method given in this document are necessary, these deviations will be specified in the relevant device standard.

1 Scope

This document specifies practical performance tests for respiratory protective devices, except for diving apparatus. The purpose of these tests is to subjectively assess certain properties, characteristics and functions of the device, when worn by test subjects in simulated practical use, which cannot be assessed by tests described in other standards.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 132, *Respiratory protective devices — Definitions of terms and pictograms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 132 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

4 Pre-requisites

In order to implement this document, at least the following parameters need to be specified in the relevant device standard:

— number of samples;

— device preparation;

— any prior conditioning or testing;

— number and selection of test subjects;

— deviations;

— pass/fail criteria;

— identification of activities (by number in Table 1), and duration/repetition if different to those specified;

— relevant test conditions for each activity e.g. ambient or low temperature;

— activity sequence, if relevant.

5 Nominal values and tolerances

Unless otherwise specified, the values stated in this document are expressed as nominal values. Except for temperature limits, values which are not stated as maxima or minima shall be subject to a tolerance of ±5 %. Unless otherwise specified, for the purpose of practical performance testing the ambient conditions shall be between 20 °C and 28 °C and a relative humidity of between 20 % and 80 %. Any temperature limits specified shall be subject to an accuracy of ±1 °C.

For each of the required measurements performed in accordance with this document, a corresponding estimate of the uncertainty of measurement should be evaluated [1]. This estimate of uncertainty should be applied and stated when reporting test results, in order to enable the user of the test report to assess the reliability of the result.

6 Test methods

6.1 Principle

Test subjects donning and wearing the device in accordance with the information supplied by the manufacturer perform activities in simulation of practical use. They are then asked to assess the device subjectively and comment accordingly.

6.2 Test subjects

Before performing any tests involving human subjects, account should be taken of any national regulations concerning the medical history, examination or supervision of the test subjects.

Test subjects who are experienced in wearing the type of respiratory protective device being tested shall be used. The medical condition of the subjects shall be satisfactory for the tasks involved. The necessity for a medical examination before the tests and for medical supervision during them is at the discretion of the appropriate responsible person of the test house.

Prior to the tests the following data shall be recorded, but not reported, for each test subject:

— name;

— age;

— sex;

— height;

— weight.

6.3 Preparation of test samples

Before testing, examine the device to see that it is in good working condition and that it can be used without hazard.

Practical performance tests shall only be performed following satisfactory testing against the laboratory tests specified in the relevant document for the respiratory protective device.

6.4 Ambient conditions

The test shall be performed in a normally lit area with a temperature from 20 °C to 28 °C and relative humidity from 30 % to 80 %.

The actual conditions of temperature and humidity and noise level shall be recorded.

6.5 Low temperature conditions

The test shall be carried out at the temperature(s) as specified in the product standard or at a lower temperature if specified by the manufacturer.

The actual temperature shall be recorded.

6.6 Assessments

The RPD shall be judged to have failed the practical performance test if the test subjects are unable to satisfactorily complete the required activities.

During the activities the RPD shall be subjectively assessed by each wearer, and after completing the test activities the subject shall be asked for comments. If the comments received indicate that there might be issues that affect the safe use of the RPD, these shall be confirmed by further observations and testing. It is permitted for the observer to add his own comments. Suggested areas for comments are:

a) ease of donning and doffing;

b) head harness (if fitted) – i.e. donning and doffing, adjustability, security and comfort;

c) comfort of facepiece;

d) compatibility with skin;

e) comfort of body harness, belt and breathing bag (if fitted);

f) comfort of wearing and balance of the device;

g) clarity of vision through the visor of the facepiece (if fitted), including misting, for example the visibility of a sign (e.g. an "Exit" sign) consisting of letters 150 mm in height at a distance of 6 m;

h) field of vision, to be determined with the component normally to be used with the facepiece fitted to it;

i) speech transmission;

j) security of fastenings and couplings(if fitted);

k) accessibility of controls and pressure gauge (if fitted);

l) ease of operation and ease of interpretation of the checking facility for the manufacturer's minimum design flow rate (if fitted);

m) inadvertent operation of the on-off switch or of any means of changing flow rate or classification of the device (if fitted);

n) operation and effectiveness of warning device (if fitted);

o) manoeuvrability/kinking of breathing hose, air supply hose or compressed air supply tube (if fitted);

p) freedom of head movement with respect to breathing hose (if fitted);

q) comfort of breathing (e.g. temperature, pressure, quantity);

r) any stress or discomfort caused by the flow rate or distribution of the air;

s) ease of operation of supplementary air supply (if fitted);

t) ease of obtaining ambient air or the use of any emergency system provided (if applicable);