ICS 13.100, 25.160.01 SLOVENSKÁ TECHNICKÁ NORMA August 2024

STN	**Zdravie a bezpečnosť pri zváraní a príbuzných procesoch Odber vzoriek častíc rozptýlených vo vzduchu a plynov v dýchacej zóne operátora Časť 1: Odber vzoriek častíc rozptýlených vo vzduchu (ISO 10882-1: 2024)**	**STN EN ISO 10882-1** 05 0606

Health and safety in welding and allied processes - Sampling of airborne particles and gases in the operator`s breathing zone - Part 1: Sampling of airborne particles (ISO 10882-1:2024)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/24

Obsahuje: EN ISO 10882-1:2024, ISO 10882-1:2024

Oznámením tejto normy sa ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 10882-1

May 2024

ICS 13.100; 25.160.01

Supersedes EN ISO 10882-1:2011

English Version

Health and safety in welding and allied processes - Sampling of airborne particles and gases in the operator's breathing zone - Part 1: Sampling of airborne particles (ISO 10882-1:2024)

Hygiène et sécurité en soudage et techniques connexes - Échantillonnage des particules en suspension et des gaz dans la zone respiratoire des opérateurs - Partie 1: Échantillonnage des particules en suspension (ISO 10882-1:2024)

Arbeits- und Gesundheitsschutz beim Schweißen und bei verwandten Verfahren - Probenahme von partikelförmigen Stoffen und Gasen im Atembereich des Schweißers - Teil 1: Probenahme von partikelförmigen Stoffen (ISO 10882-1:2024)

This European Standard was approved by CEN on 3 September 2023.

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

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Ref. No. EN ISO 10882-1:2024 E

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European foreword

This document (EN ISO 10882-1:2024) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2024, and conflicting national standards shall be withdrawn at the latest by November 2024.

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 ISO 10882-1:2011.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, 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, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 10882-1:2024 has been approved by CEN as EN ISO 10882-1:2024 without any modification.

International Standard

ISO 10882-1

Third edition
2024-04

Health and safety in welding and allied processes — Sampling of airborne particles and gases in the operator's breathing zone —

Part 1: Sampling of airborne particles

Hygiène et sécurité en soudage et techniques connexes — Échantillonnage des particules en suspension et des gaz dans la zone respiratoire des opérateurs —

Partie 1: Échantillonnage des particules en suspension

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 9, *Health and safety*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 10882-1:2011), which has been technically revised.

The main changes are as follows:

— references to other documents have been updated;

— in 8.2 and 9.3.1.1, alternative personal sampling position(s) for air-fed welder’s helmets and sampling methods with more than one collection device have been added.

A list of all parts in the ISO 10882 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

Introduction

The health of workers in many industries is at risk through exposure by inhalation to airborne particles generated by welding and allied processes (welding fumes) and other airborne particles generated by welding-related operations, such as grinding. Industrial hygienists and other public health professionals need to determine the effectiveness of measures taken to control workers' exposure to these harmful substances and this is generally achieved by making personal exposure measurements.

This document is intended to be of benefit to agencies concerned with health and safety at work, industrial hygienists and other public health professionals, industrial users of welding and allied processes and their workers, and analytical laboratories.

It has been assumed in the drafting of this document that the execution of its provisions, and the interpretation of the results obtained, is entrusted to appropriately qualified and experienced people.

International Standard **ISO 10882-1:2024(en)**

Health and safety in welding and allied processes — Sampling of airborne particles and gases in the operator's breathing zone —

Part 1: Sampling of airborne particles

1 Scope

This document specifies a procedure for sampling airborne particles in the breathing zone of a person who performs welding and allied processes (the operator). It also provides details of relevant standards that specify required characteristics, performance requirements and test methods for workplace air measurement, and augments guidance provided in EN 689 on assessment strategy and measurement strategy.

This document also specifies a procedure for making gravimetric measurements of personal exposure to airborne particles generated by welding and allied processes (welding fumes) and other airborne particles generated by welding-related operations.

Additionally, it provides references to suitable methods of chemical analysis specified in other standards to determine personal exposure to specific chemical agents present in welding fumes and other airborne particles generated by welding-related operations.

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.

ISO 7708:1995, *Air quality — Particle size fraction definitions for health-related sampling*

ISO 15767, *Workplace atmospheres — Controlling and characterizing uncertainty in weighing collected aerosols*

ISO 18158:2016, *Workplace air — Terminology*

EN 482, *Workplace exposure — General requirements for the performance of procedures for the measurement of chemical agents*

EN 13205-1, *Workplace exposure — Assessment of sampler performance for measurement of airborne particle concentrations — Part 1: General requirement*