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Eye and face protection — Guidance on selection, use and maintenance

Protection des yeux et du visage — Lignes directrices pour le choix, l'utilisation et l'entretien

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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 documents 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 94 *Personal safety — Personal protective equipment*, Subcommittee SC 6 *Eye and face protection*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 85, *Eye-protective equipment,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

Introduction

This document is intended to provide guidance on how to select, use and maintain eye and face protectors. A workplace eye and face safety programme should be introduced and a hierarchy of control followed where workers are exposed to a recognised risk of injury to the eyes and/or face. Examples of areas and processes where eye and/or face hazards may exist are shown in Tables 2, 4 and 5.

The aim of an eye and face safety programme is to protect the eyes and face of the worker through the process of elimination or control of hazards and, where necessary, the wearing of appropriate protection.

While responsibility for the successful implementation of an eye and face safety programme rests with senior management, every effort is required to secure the participation and involvement of employees or their representatives in all phases of the programme. Experience has shown that programmes lacking this involvement have less chance of success.

A critical examination of working conditions, particularly lighting, layout and planning of buildings and processes, forms a necessary part of an eye and face safety programme.

Selection of a suitable programme may be assigned to safety personnel within the organisation or advice may be sought from outside sources. Elements that have been found in successful eye and face safety programmes include the following:

a) An assessment of hazards.

b) Determination of workplace hazard areas.

c) Elimination or confinement of hazards (where possible).

d) Vision screening.

e) Referral for optometric, ophthalmological examination or both, where necessary.

f) The universal wearing of suitable eye and face protectors for those persons at risk.

g) Educational campaigns on eye safety.

Eye and face protectors are items of personal protective equipment (PPE) intended to prevent the harmful effects that physical (e.g. flying particles, dust, splashing and molten materials), optical (e.g. solar and artificial radiation and high intensity radiation generated during operations such as welding and furnace work), chemical (e.g. pressurised materials, harmful gases, vapours and aerosols) and biological hazards may have to the eye and face.

For eye and face protectors to be effective they should be used at all times when the user is in a potentially hazardous environment. When selecting eye and face protectors, attention should be given to factors influencing comfort and user preference.

Those involved in selling eye and face protectors to the general public for use in non-workplace settings should adhere to the principles and guidance in this standard to ensure that users of personal protective equipment are fully informed about making the safest choice for a particular task and environment as well as how to use the protective equipment in the safest manner. This should also apply to those businesses that hire out power equipment. Safety guidance based on this document should be provided to prospective customers to ensure that they select and use the correct protective equipment to reduce the risk of eye and face injury.

Eye and face protection — Guidance on selection, use and maintenance

1 Scope

This document gives guidance to specifiers and users on the control of eye and face hazards including physical, mechanical, chemical, optical radiation and biological and on the selection, use and maintenance of eye and face protectors.

This document applies to

— occupational use,

— tasks that are performed similarly to those in an occupation but not in the workplace, e.g. "do-it-yourself", and

— schools, educational and research establishments.

This document does not apply to eye and face protection for

— ionizing radiation,

— low frequency radio waves,

— microwaves,

— sports or vehicular usage, and

— sunglasses for general (not occupational) use – see ISO 12312-1.

NOTE The ISO 18527 (all parts) sets requirements for eye protectors for some sports.

Brief advice on protection when using lasers is included but for detailed advice, see IEC/TR 60825-14.

This document is neither a whole nor partial substitute for risk assessment, which is an essential part of any eye and face protection programme.

Although this document has been written to help specifiers and users, any recommendations in this document are to be interpreted as guidance only and not intended to replace any national regulatory requirements. Risk assessment is the sole responsibility of the employer and not the PPE manufacturer or its authorised representative.

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 4007, *Personal protective equipment — Eye and face protection — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4007[1)] and the following apply[2)].

1) The terms and definitions for risk and hazard have been included here for the reader's convenience.

2) The abbreviation PPE means personal protective equipment.