

AS/NZS ISO 16976.6:2024
ISO 16976-6:2023



Australian/New Zealand Standard™

Respiratory protective devices — Human factors

Part 6: Psycho-physiological effects



AS/NZS ISO 16976.6:2024

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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee SF-010, Occupational Respiratory Protection to supersede SA/SNZ TS ISO 16976.6:2021, *Respiratory protective devices — Human factors, Part 6: Psycho-physiological effects*.

The objective of this document is to provide information on the psycho-physiological effects related to the wearing of respiratory protective devices (RPD) and it is intended for the preparation of standards for selection and use of RPD.

It specifies for the writers of RPD standards, principles relating to —

- (a) the interaction between RPD and the human physiological and psychological perception,
- (b) the acceptance by the wearer, and
- (c) the need for training to improve acceptance of the RPD by the wearer.

This document does not cover requirements related to the specific hazard for which the RPD is designed.

This document is identical with, and has been reproduced from ISO 16976-6:2023, *Respiratory protective devices — Human factors — Part 6: Psycho-physiological effects*.

As this document has been reproduced from an international document, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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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 — Protective clothing and equipment, Subcommittee SC 15, Respiratory protective devices.

This first edition of ISO 16976-6 cancels and replaces the second edition of the Technical Specification ISO/TS 16976-6:2014, which has been technically revised.

The main changes are as follows:

- the document has been editorially revised.

A list of all parts in the ISO 16976 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.

Introduction

This document addresses the psychological factors that can trigger physiological effects (psycho-physiology effects) that contribute to user acceptance, or the ability to tolerate wearing respiratory protective devices (RPD) for the duration needed. This document takes the position that the psychological state has a physiological correlate (e.g. anxiety is accompanied by an increase in heart rate) and that the physiological responses to wearing an RPD have an impact on the psychology of the wearer (e.g. difficulty in breathing will result in anxiety). The following clauses focus on a separate psycho-physiological situation that can impact user acceptance or contribute to the likelihood of the wearer removing the RPD prematurely and, thus, being exposed to a respiratory hazard. The physiological responses to wearing an RPD is addressed first followed by a discussion on the psychological responses to wearing RPD. The discussion then turns to the methodologies used to measure the psycho-physiological responses and how these measurements are used to predict whether an individual will have difficulty wearing an RPD. Finally, this document addresses the selection criteria that can be used to determine who is best suited to engage in an occupation requiring the use of RPD.

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