SS 548:2022
(ICS 13.340.30)

SINGAPORE STANDARD

Code of practice for the selection, use and maintenance of respiratory protective devices

Singapore Standards Council

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Published by Enterprise Singapore

ISBN 978-981-5073-44-7

Contents

Figures

Foreword

This Singapore Standard was prepared by the Working Group on Respiratory Protective Devices set up by the Technical Committee on Personal Safety and Health under the purview of the Quality and Safety Standards Committee (QSSC).

This is a revision of SS 548:2022, “Code of practice for the selection, use and maintenance of respiratory protective devices”. The main changes include the following:

- Additional information and clarification on use of respiratory protective devices in healthcare against biohazards.
- Further alignment of the components of a respiratory protection programme with global standards and local requirements.
- More information on fit test operator competency checklist, types and selection of fit test methods, medical evaluation to use respirators, proper selection, use and maintenance of respiratory protective devices.

It is presupposed that in the course of their work, users will comply with all relevant regulatory and statutory requirements. Some examples of relevant regulations and acts are listed in the Bibliography. The Singapore Standards Council and Enterprise Singapore will not be responsible for identifying all of such legal obligations.

In preparing this standard, reference was made to the following publications:

1. AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment

2. EN 529:2005 Respiratory protective devices – Recommendations for selection, use, care and maintenance − Guidance document

3. OSHA 1910.134 (2019) Respiratory protection

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1. Drägerwerk AG & Co. KGaA, Figures 4 (c), 4 (d), 5 (b) and 5 (c). Images courtesy of Drägerwerk AG & Co. KGaA

2. International Organization for Standardization (ISO)

   - Figure 2 from Table 5 of ISO 7010:2019 Graphical symbols – Safety colours and safety signs – Registered safety signs
   - Table E.3 from Annex A of ISO 16975-3:2017 Respiratory protective devices – Selection, use and maintenance – Part 3: Fit-testing procedures

   ISO standards can be purchased from Enterprise Singapore.

3. MSA The Safety Company, Figures 4 (d) and 5 (a). Images courtesy of MSA Safety.

4. National Institute of Occupational Safety and Health (NIOSH)

   - Clause 3.8 from 3.2 of NIOSH-Certified Equipment, DHHS (NIOSH) Publication 2015-117, Hospital respiratory protection program toolkit: Resources for respirator program administrators
   - Clause 3.20 from Overview of immediately dangerous to life or health (ILDH) values

5. Occupational Health Dynamics (OHD), Figure E.3. Images courtesy of OHD.

6. Occupational Safety and Health Administration (OSHA), United States, Department of Labour

   - Clause 3.20 from OSHA 1910.134(b)
   - Table C.2, part C from OSHA 1910.134 App C – OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

7. 3M Technologies, Figures 4 (a), 4 (b), 4 (c), 4 (e), 5 (d), 7, D.1, D.2. Images courtesy of 3M Technologies.

8. TSI Incorporated, Figure E.2. Photo courtesy of TSI Incorporated.

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NOTE

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Code of practice for the selection, use and maintenance of respiratory protective devices

1 Scope

This standard sets out the requirements and recommendations for users of respiratory protective devices (RPDs) on the selection, use, and maintenance of respirators for establishing a respiratory protection programme. This standard also covers the use of respirators to protect persons against the inhalation of contaminants and oxygen-deficient atmospheres in the workplace.

This standard does not cover the following:

a) Use of respirators under military combat conditions;

b) Life support ventilators for medical or resuscitation purposes;

c) Respirators used in a non-occupational setting (e.g. public health emergencies);

d) Masks used for comfort or hygiene purposes, not designed as RPDs; and

e) Surgical masks which are designed to reduce the user's respiratory emissions to others. These masks can provide users with some protection against large droplets, fluid splashes or sprays but do not offer a reliable level of protection from inhaling smaller airborne particles, gases or vapours. Leakages can also occur around the edge of the mask when the user inhales, therefore it is not considered respiratory protection.

NOTE − Surgical masks for use in the health care industry are subject to review/approval by the regulatory authorities.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

SS 508	Graphical symbols – Safety colours and safety signs Part 1: Design principles for safety signs and safety markings Part 2: Design principles for product safety labels Part 3: Design principles for graphical symbols for use in safety signs Part 4: Colorimetric and photometric properties of safety sign materials Part 5: Registered safety signs
SS 568	Code of practice for confined spaces
SS 639-1	Code of practice for the filling, inspection, testing and maintenance of gas cylinders for the storage and transport of compressed gases – Part 1: Seamless steel and aluminium alloy cylinders (excluding dissolved acetylene) – Inspection at the time of filling, periodic maintenance and testing