

Prepared by:

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Occupational Health and Safety Act

25. (1) An employer shall ensure that,

- (a) the equipment, materials and protective devices as prescribed are provided;
- (b) the equipment, materials and protective devices provided by the employer are maintained in good condition;
- (c) the measures and procedures prescribed are carried out in the workplace;
- (d) the equipment, materials and protective devices provided by the employer are used as prescribed; and

Idem

(2) Without limiting the strict duty imposed by subsection (1), an employer shall,

- (a) provide information, instruction and supervision to a worker to protect the health or safety of the worker;
- (h) take every precaution reasonable in the circumstances for the protection of a worker;

Additional duties of employers

26. (1) In addition to the duties imposed by section 25, an employer shall,

- (g) comply with a standard limiting the exposure of a worker to biological, chemical or physical agents as prescribed;
- (k) where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for the protection of a worker; and

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(l) carry out such training programs for workers, supervisors and committee members as may be prescribed.

Duties of supervisor

27. (1) A supervisor shall ensure that a worker,

(a) works in the manner and with the protective devices, measures and procedures required by this Act and the regulations; and

(b) uses or wears the equipment, protective devices or clothing that the worker's employer requires to be used or worn.

Additional duties of supervisor

(2) Without limiting the duty imposed by subsection (1), a supervisor shall,

(a) advise a worker of the existence of any potential or actual danger to the health or safety of the worker of which the supervisor is aware;

(b) where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for protection of the worker; and

(c) take every precaution reasonable in the circumstances for the protection of a worker. R.S.O. 1990, c. O.1, s. 27

Duties of workers

28. (1) A worker shall,

(a) work in compliance with the provisions of this Act and the regulations;

(b) use or wear the equipment, protective devices or clothing that the worker's employer requires to be used or worn;

(c) report to his or her employer or supervisor the absence of or defect in any equipment or protective device of which the worker is aware and which may endanger himself, herself or another worker; and

(d) report to his or her employer or supervisor any contravention of this Act or the regulations or the existence of any hazard of which he or she knows.

(2) No worker shall,

(a) remove or make ineffective any protective device required by the regulations or by his or her employer, without providing an adequate temporary protective device and when the need for removing or making ineffective the protective device has ceased, the protective device shall be replaced immediately;

Refusal to work

(3) A worker may refuse to work or do particular work where he or she has reason to believe that,

(a) any equipment, machine, device or thing the worker is to use or operate is likely to endanger himself, herself or another worker;

(b) the physical condition of the workplace or the part thereof in which he or she works or is to work is likely to endanger himself or herself;

Industrial Regulation 851

Protective Equipment

79. A worker required to wear or use any protective clothing, equipment or device shall be instructed and trained in its care and use before wearing or using the protective clothing, equipment or device. R.R.O. 1990, Reg. 851, s. 79; O. Reg. 420/10, s. 12.

84. A worker exposed to the hazard of injury from contact of the worker's skin with,

(a) a noxious gas, liquid, fume or dust;

127. An industrial establishment shall be adequately ventilated by either natural or mechanical means such that the atmosphere does not endanger the health and safety of workers. R.R.O. 1990, Reg. 851, s. 127.

130. A worker who may be exposed to a biological, chemical or physical agent that may endanger the worker's safety or health shall be trained,

(a) to use the precautions and procedures to be followed in the handling, use and storage of the agent;

(b) in the proper use and care of required personal protective equipment; and

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(c) in the proper use of emergency measures and procedures. R.R.O. 1990, Reg. 851, s. 130.

137. Protective clothing or other safety device that has been worn next to the skin shall be cleaned and disinfected prior to being worn by another worker. R.R.O. 1990, Reg. 851, s. 137.

Construction Regulation 213

Protective Clothing, Equipment and Devices

21. (1) A worker shall wear such protective clothing and use such personal protective equipment or devices as are necessary to protect the worker against the hazards to which the worker may be exposed. O. Reg. 213/91, s. 21 (1).

(2) A worker's employer shall require the worker to comply with subsection (1). O. Reg. 213/91, s. 21 (2).

(3) A worker required to wear protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment or device before wearing or using it. O. Reg. 213/91, s. 21 (3).

25. A worker shall use protection appropriate in the circumstances when there is a risk of injury on a project from contact between the worker's skin and,

(a) a noxious gas, liquid, fume or dust;

Dust Control

59. If the dissemination of dust is a hazard to a worker, the dust shall be adequately controlled or each worker who may be exposed to the hazard shall be provided with adequate personal protective equipment. O. Reg. 145/00, s. 19.

60.-63. Revoked: O. Reg. 628/05, s. 2.

CSA Standard Z94.4-11: Selection, Use, and Care of Respirators



Authors Note: It should be noted that standards are not considered law however are viewed as best practice. The Ontario Ministry of Labour endorses these standards as a “prescribed” duty. Failing to implement a best practice can be viewed as failing to take all precautions necessary in the circumstances (as per 25(2)(h) of the OHS Act: Duties of Employers)

Tight-fitting sealing surface — the entire area where a respirator is designed to contact the skin, including, where present, a secondary interior flange. For tight-fitting hoods, the sealing surface is provided by the neck dam and can also include a secondary nose cup.

4.2 Employer responsibility

4.2.1 The employer shall be responsible for preparing and implementing, in consultation with users, a written respiratory protection program including all of the elements listed in Clause 4.3. Written procedures, as appropriate, shall also be included.

4.2.2 The employer shall ensure that (a) its respiratory protection program is effective (see Clause 13); (b) all program roles are assigned to qualified persons (see Clause 5); and (c) each individual assigned to one or more program roles shall be able to demonstrate and maintain a level of competency in the roles for which they are responsible (see Clauses 5 and 9).

4.2.3 Program roles (see Clause 5) A respiratory protection program shall include the following roles: (a) program administrator; (b) respirator user; (c) supervisor; (d) person selecting respirators; (e) fit tester; (f) issuer of respirators; (g) maintenance personnel; and (h) health care professional.

4.3 Program components A respiratory protection program shall consist of the following components: (a) roles and responsibilities (Clause 5); (b) hazard assessment (Clause 6); (c) respirator selection (Clause 7); (d) training (Clause 8); (e) respirator fit testing (Clause 9); (f) use of respirators (Clause 10); (g) cleaning, inspection, maintenance, and storage of respirators (Clause 11); (h) health surveillance (Clause 12); (i) program evaluation (Clause 13); and (j) recordkeeping (Clause 14).

7.2 Classification of respirators

7.2.1 For the purpose of selection, respirators shall be grouped as follows:

(a) atmosphere-supplying respirators:

(i) self-contained breathing apparatus (SCBA) (pressure-demand, open- or closed-circuit);

(ii) airline (pressure-demand or continuous-flow); and

(iii) multi-functional (a configuration incorporating both SCBA and airline);

(b) air-purifying respirators, non-powered (APR) and powered (PAPR):

(i) gas- and vapour-removing;

(ii) particulate-removing;

(iii) gas-, vapour-, and particulate-removing; and

(iv) multi-functional (a configuration incorporating both APR and PAPR);

(c) combined respirator (a configuration incorporating both atmosphere-supplying and air-purifying); and

(d) escape-only respirators (atmosphere-supplying or air-purifying).

The Trainer

8.1.5 Instruction Provision of instruction to program participants requires a practical understanding of the respiratory protection program requirements. A qualified person shall provide instruction regarding the requirements of the respiratory protection program, including (a) policies, procedures, roles, and responsibilities; (b) the respiratory hazards encountered in the workplace, their potential health effects on the worker, and the means to control them; (c) the rationale for the respirators selected and where to find more information about them; and (d) procedures to follow in case of an emergency. Note: Documentation of all program instruction should be maintained.

The Training

8.2 Provision of training

8.2.1 Training shall be provided by a qualified person or persons with a practical understanding of the respiratory protection program roles, responsibilities, and requirements and the ability to coordinate the multiple training requirements of the program.

Author Note: *Although the CSA standard does not specify the frequency of which refresher training is required, it is a widely accepted practice in industry, health care, government and educational institutions to conduct fit testing every 2 years. The author was personally advised by Laurie Wheeler, Industrial Hygienist, Ontario Ministry of Labour, that she would “uphold the CSA standard for fit testing and training to be completed every two years” and went on to say that she would “prefer a frequency of every year.”*

Annex J (informative)

Checklist of competency for respirator fit testers

Note: This Annex is not a mandatory part of this Standard.

Areas of fit tester competency (see Clauses 4, 5, 8, 9, and 14)	Proficient	Improvement required
1 Respiratory protection and fit testing fundamentals		
(a) Requirements for the use of respiratory protection	<input type="checkbox"/>	<input type="checkbox"/>
(b) Limitations on the use of respiratory protection (see Annex G of CSA Z94.4-11)	<input type="checkbox"/>	<input type="checkbox"/>
(c) Purpose and applicability of respirator fit testing (see Tables 1 and 2 of CSA Z94.4-11)	<input type="checkbox"/>	<input type="checkbox"/>
(d) Specific roles and responsibilities of the respirator fit tester	<input type="checkbox"/>	<input type="checkbox"/>
2 Respiratory protection requirements		
(a) Specific requirements as outlined in the organization's respiratory protection program	<input type="checkbox"/>	<input type="checkbox"/>
(b) CSA Z94.4-11 regarding fit testing, interference concerns, user screening, training, inspection, use, cleaning, maintenance, and storage	<input type="checkbox"/>	<input type="checkbox"/>
(c) Applicable regulatory requirements	<input type="checkbox"/>	<input type="checkbox"/>
3 Respirators identified in the respiratory protection program (RPP)		
(a) Types of respirators required as determined in the RPP	<input type="checkbox"/>	<input type="checkbox"/>
(b) Make, model, and size of selected respirator inlet covering types	<input type="checkbox"/>	<input type="checkbox"/>
(c) Respirator components and their functions	<input type="checkbox"/>	<input type="checkbox"/>
4 Pre-use requirements for the selected respirator(s)		
(a) Respirator assembly, pre-use inspection, cleaning and sanitizing, and maintenance	<input type="checkbox"/>	<input type="checkbox"/>
(b) Donning, user seal check procedures, doffing, and redonning	<input type="checkbox"/>	<input type="checkbox"/>
5 Verification of respirator user's competency		
Verification of user's competency to perform pre-use inspection, donning, and user seal check procedures, doffing, and redonning without assistance from the fit tester	<input type="checkbox"/>	<input type="checkbox"/>
6 Organization of fit testing workspace, equipment, and activity		
(a) Room layout and management of ventilation	<input type="checkbox"/>	<input type="checkbox"/>
(b) Placement of fit test equipment	<input type="checkbox"/>	<input type="checkbox"/>
(c) Orderly management of the fit test process	<input type="checkbox"/>	<input type="checkbox"/>
7 Operational aspects and issues in fit test method(s) being used		
(a) Knowledge of fit test procedures, requirements, and limitations	<input type="checkbox"/>	<input type="checkbox"/>

8.1.4 Fit testing The fit tester shall be competent in the applicable fit test methods and be able to verify a user's ability to obtain an effective respirator seal, comfort, and fit for a **tight-fitting respirator**. The fit tester shall also be able to manage the overall fit testing process, including the transition between sensitivity screening and fit testing where applicable, interpret test results, and document user, respirator, and instrument performance. See Annex J for a checklist that can be used as a supplement to the summary of training matrix provided in Table 3 to determine the competency of fit testers.

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Selection, use, and care of respirators

Areas of fit tester competency (see Clauses 4, 5, 8, 9, and 14)	Proficient	Improvement required
(c) Identification, knowledge, and understanding of erroneous fit test results	<input type="checkbox"/>	<input type="checkbox"/>
(d) Awareness of health and safety issues associated with chemicals and equipment used in fit testing	<input type="checkbox"/>	<input type="checkbox"/>
8 Use selected respirators and fit testing equipment		
(a) Select, set up, and use QNFT or QLFT equipment and accessories	<input type="checkbox"/>	<input type="checkbox"/>
(b) Choose the appropriate canisters/cartridges/filters for the fit test method	<input type="checkbox"/>	<input type="checkbox"/>
(c) Set up respirator facepiece assembly, use of probes, QNFT adapters and, where required, software application	<input type="checkbox"/>	<input type="checkbox"/>
(d) Prepare, inspect, and perform operational checks of fit test equipment and supplies	<input type="checkbox"/>	<input type="checkbox"/>
(e) Create and maintain records of fit test equipment maintenance, diagnostic checks, calibration, and repair	<input type="checkbox"/>	<input type="checkbox"/>
9 Conduct respirator fit tests		
(a) Confirm user pre-qualifications for fit testing (i.e., completion of user screening, training, freedom from interference concerns due to facial hair and other personal conditions, effects, or accessories)	<input type="checkbox"/>	<input type="checkbox"/>
(b) Oversee the matching up of a respirator (make, model, and size) with user's physical characteristics	<input type="checkbox"/>	<input type="checkbox"/>
(c) Identify a poorly fitting respirator through observation and questioning about comfort and fit (for QLFT, see Clauses B.2.3.3, B.2.3.4, and B.2.3.8 of CSA Z94.4-11; for QNFT, see Clauses C.2.3.3, C.2.3.4, and C.2.3.8 of CSA Z94.4-11)	<input type="checkbox"/>	<input type="checkbox"/>
(d) Verify through observation and questioning, without coaching or assistance, that donning, a user seal check, doffing, and redonning are performed successfully	<input type="checkbox"/>	<input type="checkbox"/>
(e) Confirm compatibility of other personal protective equipment during the fit test	<input type="checkbox"/>	<input type="checkbox"/>
(f) Conduct the chosen procedure (QLFT or QNFT) in accordance with Annex B or C of CSA Z94.4-11	<input type="checkbox"/>	<input type="checkbox"/>
(g) Confirm fit tester and user adherence to the entire fit test procedure	<input type="checkbox"/>	<input type="checkbox"/>
(h) Apply problem-solving solutions (for the user, equipment, and environment) before, during, and after the fit test process, addressing fit test failures if they occur	<input type="checkbox"/>	<input type="checkbox"/>
(i) Interpret and document results of the fit test	<input type="checkbox"/>	<input type="checkbox"/>
(j) Communicate the need to use only the specific respirator make, model, and size with which the user passed the fit test	<input type="checkbox"/>	<input type="checkbox"/>
(k) Ensure that cleaning and sanitizing of respirators and fit testing equipment is carried out according to the manufacturer's instructions and the organization's infection control program	<input type="checkbox"/>	<input type="checkbox"/>

The Requirement to Fit Test Tight-Fitting Respirators

9 Respirator fit testing

9.1 General

9.1.1 The purpose of a qualitative or quantitative fit test is to verify a user's ability to obtain an effective seal and an acceptably comfortable fit for a selected tight-fitting respirator. The fit test process also verifies that a user is able to demonstrate the required level of competency in donning and doffing the respirator, as well as inspecting it and performing a user seal check.

9.1.2 No person shall use or be assigned to use a tight-fitting respirator until a satisfactory fit has been verified by a qualitative or quantitative fit test.

9.1.3 The fit test shall be used to verify the selection of the specific make, model, and size of a tight-fitting respirator for individual users. A sufficient variety of respirators shall be provided to ensure that each user has an opportunity to obtain a satisfactory fit because no single make, model, or size can be expected to fit all persons. The fit tester shall not force fit a respirator being fit tested.

9.1.6 A fit test shall be carried out

(a) after completion of user screening (see Clause 12.1); (b) after or during training (see Clause 8); (c) prior to initial use of a tight-fitting respirator; (d) when changes to a user's physical condition (e.g., significant weight change or changes to facial or dental features) could affect the respirator fit; **(e) when there is a change in respirator (e.g., make, model, size)**; (f) when a respirator user experiences continued significant discomfort during use or difficulty in completing a successful user seal check; (g) when there is a change in PPE use that could affect the respirator; and (h) **at least every 2 years**.

Can you conduct qualitative fit testing on a negative-pressure air-purifying particulate mask?

See column 1 under Type, 2 Filtering face piece, 3 yes

Table 1
Applicable qualitative fit test (QLFT) methods and
pass criteria for tight-fitting respirators
 (See [Clauses 9.3](#) and [9.4](#), [Figure 4](#), and [Annex J](#).)

Respirator type	Inlet covering type	QLFT method (all passing results for QLFT are assumed to be a fit factor of 100)		
		Bitter or sweet aerosol	Isoamyl acetate	Irritant smoke (stannic chloride)
Negative-pressure air-purifying particulate (refer to Clause 9.3.3)	Filtering facepiece	Yes, when the respirator is fitted with a particulate filter and there shall be no interference with the test hood when the exercises are being performed.	No for filtering facepiece respirators.	No for filtering facepiece Type N or R respirators.
	Half-mask		Yes, when the respirator is fitted with a cartridge capable of removing organic vapours.	Yes for all P100 particulate filters.
	Full-facepiece (limited for use where HHR ≤ 10)			
Negative-pressure air-purifying gas/vapour (refer to Clause 9.3.3)	Half-mask			
	Full-facepiece (limited for use where HHR ≤ 10)			
Powered air-purifying particulate and gas/vapour (tested in a negative-pressure mode, i.e., without the blower activated)	Half-mask			
	Full-facepiece			
Airline, continuous-flow or pressure-demand, including combination air-purifying devices (tested in negative-pressure mode, i.e., without the air source, and with a surrogate facepiece converted to negative-pressure air-purifying respirators using cartridges or filters appropriate for the fit test method)	Half-mask			
	Full-facepiece or tight-fitting hood			
SCBA including multi-functional SCBA airline	Full-facepiece or tight-fitting hood	No	No	No