

Draft Regulations

Draft Regulation

An Act respecting occupational health and safety (R.S.Q., c. S-2.1)

Quality of the work environment

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1) and with section 224 of the Act respecting occupational health and safety (R.S.Q., c. S-2.1), that the Regulation respecting the quality of the work environment, the text of which appears below, may be adopted by the Commission de la santé et de la sécurité du travail and submitted to the Government for approval upon the expiry of 90 days following this publication.

The purpose of the draft Regulation is to prescribe general safety and hygiene standards to be maintained by an employer to preserve the quality of the work environment, to protect the workers' health and to ensure their security and physical integrity. In particular, it prescribes standards applicable to the quality of air, certain dangerous substances, ventilation, machines, the handling and transportation of equipment, work area layout and certain high-risk tasks, such as those involving diving, the use of explosives or work carried out in a confined area.

Essentially, the draft Regulation results from the amalgamation and updating of the provisions of the Regulation respecting industrial and commercial establishments (R.R.Q., 1981, c. S-2.1, r.9) and in the Regulation respecting the quality of the work environment (R.R.Q., 1981, c. S-2.1, r.15). To ensure that the scope of those regulations is in harmony with that of the Act respecting occupational health and safety (R.S.Q., c. S-2.1), the draft Regulation will apply to any establishment, no matter the area of activity, and the concept of operator will be replaced by the concept of employer.

The draft Regulation also proposes certain changes to the permissible exposure values for contaminants in the air, which appear presently in Schedule A to the Regulation respecting the quality of the environment (R.R.Q., 1981, c. S-2.1, r.15).

The draft Regulation contains no evacuation or fire prevention standards. Those will be included with other building safety standards in another regulation.

The requirements imposed by the draft Regulation take into account the businesses' financial and technical capacities. Besides, several requirements reflect the practice already established in the work environments.

However, it is foreseeable that the application of certain standards will entail additional expenses for businesses, particularly those intended to protect workers against injuries caused by machines, the measures to be taken to protect the health and safety of people working in a confined area, as well as the use of a safety harness to prevent workers from falling. On the other hand, the application of such standards should help workers to reduce considerably their risks of being seriously injured or killed.

Further information may be obtained by contacting Mr. Robert Picher, Commission de la santé et de la sécurité du travail, 524, Bourdages, Québec (Québec) G1K 7E2, tel. (418) 646-3906, fax: (418) 528-2376, or Mr. Quang Bach Pham, Commission de la santé et de la sécurité du travail, 1199, de Bleury, 7^e étage, Montréal (Québec) H3B 3J1, tel. (514) 873-6334, fax: (514) 873-5319.

Any interested person having comments to make is asked to send them in writing, before the expiry of the 45-day period, to Mr. Alain Albert, vice-president for programming and counselling, Commission de la santé et de la sécurité du travail, 1199, rue de Bleury, 14^e étage, Montréal (Québec) H3B 3J1.

All comments received will be considered by a technical parity committee composed of members representing employer and union organizations and appointed by the board of directors of the Commission de la santé et de la sécurité du travail.

TREFFLÉ LACOMBE,
*Chairman of the board of directors and
chief executive officer of the Commission
de la santé et de la sécurité du travail*

Regulation respecting the quality of the work environment

An Act respecting occupational health and safety
(R.S.Q., c. S-2.1, s. 223 par. 1, subpar. a, c, d, g to 1b,
1d to 1f, 1h to 21a, 4a and 4b, par. 2 and par. 3)

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1. Definitions: In this regulation, the following words and expressions mean:

“ACNOR”: Association canadienne de normalisation or Canadian Standards Association;

“air recirculation”: local exhaust ventilation by extraction, filtering of the air and redistribution of the filtered air in a work area;

“all-terrain vehicle”: any passenger vehicle designed for sports driving off of public thoroughfares and whose net weight does not exceed 450 kilograms;

“asbestos”: the fibrous form of mineral silicates belonging to rock-forming minerals of the serpentine group, namely chrysotile, and the amphibole group, namely actinolite, amosite, anthophyllite, crocidolite, tremolite or any mixture containing one or more of these minerals;

“asbestos dust”: airborne asbestos particles or deposited asbestos particles liable to become airborne in the work area;

“ASME”: The American Society of Mechanical Engineering;

“breathing area”: a hemisphere having a 300 mm radius extending in front of the face and measured from the midpoint of an imaginary line joining the ears;

“continuous noise”: a steady noise including a noise caused by mechanical shocks of solid bodies or by impulses repeated at a frequency greater than one per second;

“corrected dBA”: the sound level expressed in dBA after an increase in the measured level of the predominant frequency band;

“CSA”: Canadian Standards Association;

“danger zone”: zone located within or around a machine and threatens the health, safety and physical well-being of workers;

“dB”: a dimensionless unit used to express in logarithmic form the relation existing between a measured quantity and a reference value which, when applied to sound pressure, is established in accordance with section 3 of publication No. 179 (second edition, 1973) of the Central Office of the International Electrotechnical Commission;

“dBA”: the value of the overall sound level measured on the A scale established in accordance with the standards and methods prescribed in publication No. 179 (second edition, 1973) of the Central Office of the International Electrotechnical Commission;

“enclosed area”: any area that is completely or partially enclosed, especially a reservoir, a silo, a vat, a hopper, a chamber, a vault, a tank, a sewer, a pipe, a chimney, an access shaft, a truck or freight car tank:

(a) which is not designed for human occupation, nor intended to be, but may occasionally be occupied for the performance of work;

(b) access to which can only be had by a restricted entrance/exit;

(c) which can represent a risk for the health and safety of anyone who enters, owing to:

1) its design, construction or location;

2) its atmosphere or insufficiency of natural or mechanical ventilation;

3) the materials or substances that it contains;

4) or other related hazards;

“friable material”: material that can be crumbled, pulverised or powdered by hand pressure when dry or that is crumbled, pulverised or powdered;

“heat stress”: heat unbalance in a worker caused by working in a hot environment;

“high-efficiency filter”: a filter capable of filtering particles 0.3 mm in size at an efficiency rate of at least 99,97 %;

“hoisting apparatus”: includes cranes, travelling cranes, gantries, winches, blocks, lift trucks, work platform lifts, screw-type jacks, rack-type jacks and other similar apparatus but does not include elevators and dumb-waiters;

“impact noise”: any noise caused by mechanical shocks of solid bodies or by impulses repeated or not repeated at a frequency greater than or equal to one per second;

“lift basket”: any of several buckets, baskets or pods, especially used to hoist a worker on the end of a boom, sometimes referred to as a “cherry picker”;

“lifting device”: any elevator equipped with an extendable/retractable or jointed arm designed to be fitted with a carrier and used to lift workers or supplies on work sites;

“linear dB”: the overall sound level measured in such a way that the various frequencies of the sound spectrum are in no way diminished;

“load capacity”: the maximum load set by the manufacturer or an engineer;

“NFPA”: the National Fire Protection Association;

“peak value”: the maximum level reached by a sound wave;

“predominant frequency band”: a frequency band whose level passes through a maximum that exceeds the arithmetic average of the levels of the preceding and following octave bands by 4 dB or more, and for the bands at the upper and lower limits of the sound spectrum, whose level exceeds that of the contiguous octave band by 5 dB;

“protective gear”: set of devices which when used alone or with safeguards on machinery, eliminates or reduces risks for workers’ health and safety;

“respirable asbestos fibre”: asbestos fibre having a diameter of less than 3 mm and a ratio of length to diameter of more than 3:1. Only fibres longer than 5 mm are taken into account for measurement purposes;

“safety factor”: ratio between the rupture load and the working load;

“self-propelled vehicle”: a motor vehicle mounted on wheels, on caterpillars or on rails, used for the transportation of objects or materials, or for towing or pushing trolleys, carriages or materials; this expression does not

include an all-terrain vehicle or an elevating or lifting device;

“service stair”: stair leading to machinery or boiler rooms, or stair servicing any machinery platform;

“stationary work station”: any work station in which a worker is required to perform his duties for at least 4 hours of his working day over a usual work surface of 30 square metres or less;

“washroom”: any room containing one or several toilets, urinals, washbasins or showers to meet the sanitary needs of an establishment’s workers;

“work station”: any place, including a vehicle used for purposes other than agricultural, occupied by a worker to accomplish his work.

2. Compliance with a standard: For the purposes of this regulation, any equipment or facility in compliance with a standard of a standards organisation that is more recent than the one prescribed hereunder is deemed to be in compliance with this regulation.

3. Scope: Notwithstanding any provisions to the contrary, this regulation applies to all establishments.

Sections 1 to 6, 18, 43 to 47, 49 to 52, 64 to 72, 110 to 114, 116 to 126, 131 to 134, 141 to 151, 158, 159, 161 to 164, 166 to 168 and 174 to 178 and 337 also apply with necessary adaptations to construction sites or, if applicable, to construction sites specified herein.

DIVISION II GENERAL PROVISIONS

4. Purpose: The purpose of this Regulation is to establish standards pertaining especially to the quality of air, temperature, humidity, heat stress, lighting, noise and other contaminants, sanitary facilities, ventilation, hygiene, sanitation and cleanliness in establishments, area conditions, storage and handling of dangerous substances, machine and tool safety, certain high risk tasks, individual protective equipment and the transportation of workers to ensure the quality of the work environment, to safeguard workers’ health and to ensure their safety and physical well-being.

5. Employer’s obligations: Subject to section 344, the employer shall comply with the standards set hereunder.

6. Operational status of equipment: Any equipment used or installed in an establishment for purposes of preventing the emission of gases, dusts, fumes and

vapours, to ensure proper conditions for lighting, ventilation, temperature, salubrity and hygiene prescribed hereunder or to ensure that noise or heat stress conditions comply with the requirements hereunder, shall always be in operational condition and shall give optimal performance during the establishment's business hours in such manner as to provide the performance for which it was designed.

DIVISION III AREA CONDITIONS

7. Walkway access to buildings: Pedestrian passages providing access to buildings shall be:

(a) kept in good condition and free from any obstructions;

(b) maintained to keep the surface free from becoming slippery by using sand or gravel when ice is present;

(c) protected from falling objects or materials.

8. Passageway markings: In a yard, pedestrian walkways shall be separate from vehicle roadways and shall be clearly marked and easily visible.

9. Yards: Yards shall be suitably drained and level in order to facilitate access to buildings and to ensure handling of substances without risk of accidents.

10. Horizontal openings: Excavations, wells or basins presenting a hazard of fall shall be solidly covered or protected with guard-rails on all exposed sides.

The same applies to vats, tanks, reservoirs, basins and other containers used for the storing or mixing of substances that are open and whose opening is less than 750 millimetres above floor level or above a working platform.

This section does not apply to basins used for recreational purposes.

11. Vertical openings: Any opening made through a wall that presents a hazard of fall for a worker or for any object shall be protected with a guard-rail or a protective screen.

12. Guard-rails: Any guard-rail shall be so designed, constructed and installed as to withstand the following minimum loads:

(a) a 900 newtons horizontal single point load applied at any location on the top rail;

(b) a 1,5 kilonewtons per linear metre load applied vertically at the top rail.

13. Top rails: Guard-rails shall be provided with a top rail located between 900 millimetres and 1 100 millimetres from the floor, and an intermediate rail fixed at midway between the top rail and the floor.

14. Toeboard: If there is danger from falling objects capable of causing injuries, the guard-rails shall be fitted with a toeboard at floor level. Such a toeboard shall have a minimum height of 100 millimetres.

15. Floors: All floors shall:

(a) be kept in proper order, clean and free from any obstruction;

(b) have walkways that comply with section 16;

(c) be equipped with drains required for their maintenance and the draining off of liquids;

(d) free from any opening capable of causing an accident, unless they are protected with a guard-rail or a cover capable of withstanding the loads to which they may be exposed.

16. Walkways: Walkways inside a building shall:

(a) be kept in proper order and free from any obstruction;

(b) not be slippery even because of wear or humidity;

(c) be wide enough to allow the safe handling of materials and be at least 600 millimetres wide;

(d) be at least 1 100 millimetres wide if they serve as direct access to an exit;

(e) be clearly marked out by lines traced on the floor or be bordered by facilities, equipment, walls or material or merchandise depots;

(f) have a free space of at least 2 meters above the floor unless the danger is made known by means of a visible sign;

(g) be equipped with a guard-rail wherever there is the hazard of falling.

17. Work stations: A work station shall:

(a) be kept in good condition and free from any obstructions;

(b) be located on a surface that is not slippery because of wear or humidity;

(c) have sufficient free space to eliminate dangers of accidents and at least 600 millimetres in width between machines, facilities or material depots.

Subsection *c* of section 17 does not apply to a work station situated in a vehicle.

18. Cleaning: The upkeep of the work premises of an establishment shall be ensured through vacuuming, wet mopping or any other method that does not stir up dust.

19. Refuse containers: Refuses, sweepings and other residues shall be removed from work stations.

Appropriate containers shall be available in various locations for such purpose.

20. Locations of machines: The physical layout of the machines shall:

(a) leave workers with sufficient space to allow them to perform their duties safely;

(b) leave adequate space for machine maintenance and handling without any danger from substance or refuse.

21. Work station access: Any work station, with the exception of one situated in a vehicle, which is 400 millimetres above or below a floor and is not accessible by stairs, shall be accessible by a service stairway, an access ramp or a permanent ladder.

Access to such a work station cannot, however, be performed from a service stairway or an access ramp in either of the following cases:

(a) when a worker shall habitually be present at this work station every day;

(b) when a worker cannot use both his hands for holding onto the side rails or rungs of the permanent ladder providing access to the work station.

22. Service stairway: A service stairway shall:

(a) have a minimum width of 550 millimetres;

(b) have a slope between 20° and 50° with the horizontal, except for stairways installed before January 1, 1973 which may have a slope up to 60°;

(c) be provided with guard-rails along any free side;

(d) be provided with steps having:

1) a uniform depth and width in any one flight;

2) a depth of at least 150 millimetres (nose excluded);

3) a maximum height of 240 millimetres, except for stairways built before January 1, 1973 for which the stair height may reach 280 millimetres;

(e) have a free space of at least 2 meters above each stair, measured from the nose or the forward part of the stair.

The depth of stairs on a circular or spiral service stairway shall measure 230 millimetres from the post or the supports for the railing located on the inside of the stairway.

Subsection 5 of this section only applies to stairways built, installed or modified starting on the date of the coming into force of this regulation and whose construction, installation or modification does not require a modification of the existing building structure. An adequate warning sign shall mark stairways that do not comply with subsection 5.

23. Prohibited usage: A service stairway shall never be used as an exit.

24. Permanent ladders: Permanent ladders used to replace service stairways shall:

(a) be of safe construction and solidly anchored to withstand a mass of 90 kilograms at the centre of the rungs with a safety factor of 4;

(b) for ladders exceeding 9 metres, have rest platforms equipped with guard-rails, at intervals not exceeding 6 metres;

(c) have a space behind the rungs of at least 150 millimetres;

(d) have a free space on each side of at least 375 millimetres and forward of at least 800 millimetres, measured from the centre of a rung;

(e) extend 900 millimetres beyond the top storey;

(f) be provided with guard-rails surrounding the floor opening with a removable gate for access to the ladder;

(g) be provided with crinolines or cages where there is danger of a fall greater than 6 metres.

25. Exception: Notwithstanding paragraph 2 of section 24, the permanent ladders servicing elevated towers, water reservoirs or other elevated constructions rarely frequented, may be exempt from rest platforms.

26. Compliance with the standard: Any portable ladder and any stepladder used on a work site shall comply with the CAN3-Z11-M81 Portable Ladders standard.

Nonetheless, existing portable ladders and stepladders that comply with the ACNOR Z11-1969 Portable Ladders standard may also be used if they are in good condition.

27. Conditions for use: Portable ladders shall:

(a) rest on a firm base with the upper part propped on the 2 siderails;

(b) be firmly held in place by one or more people, if it is not firmly attached and if its length is equal to or more than 9 meters;

(c) be protected against any slipping of the feet and against any shock that could compromise equilibrium;

(d) if not firmly fixed, be so inclined that the horizontal distance between the base of the ladder and the vertical plane of its top support is approximately between the quarter and the third of the length of the ladder between its supports;

(e) where used as a means of access:

1) be firmly fixed in place;

2) extend 900 millimetres beyond the top storey;

3) have a space behind the rungs of at least 150 millimetres;

(f) be set in such a manner that there is sufficient space at the base;

(g) never be used as a horizontal prop;

(h) never be linked to another, end to end, by lapped joints;

(i) when used close to electrical conductors, be made of wood or other insulating material;

(j) have a sufficient length so the worker does not work from the two top rungs;

(k) not be put on a scaffolding, an elevated platform, an aerial basket or platform, on crates, barrels or in front of a door opening onto the ladder.

28. Maximum length: The length of a portable extension ladder with 2 or more extensions, measured along the siderails, cannot exceed 15 meters.

29. A step-ladder: Where a step-ladder is used on a work site, it shall:

(a) when used close to electrical conductors, be made of wood or other insulating material;

(b) have the legs fully spread and the retaining device locked.

30. Prohibited usage: The top and the pail shelf of a step-ladder shall never be used as a step.

31. Permitted length of use: A ladder or a step-ladder may be used to perform a task for a period not in excess of one hour.

32. Safety precaution: The worker shall always be turned facing the ladder or step-ladder while climbing or descending.

33. Gangways and platforms: Gangways and platforms, except those forming an integral part of a scaffolding, shall:

(a) not be subject to loads heavier than the ones specified by the manufacturer or by an engineer;

(b) be provided with guard-rails complying with sections 12 to 14 on the sides exposed to falls, if their height from the ground or floor is higher than 450 millimetres, except for unloading piers and loading platforms;

(c) when they are open-worked and located more than 1,8 metres above the floor or the ground, not include openings through which a sphere 30 millimetres in diameter can pass;

(d) have a minimum width of 600 millimetres;

(e) have a free space of at least 2 meters above and below, unless a danger sign is posted.

34. Installation of scaffolds: Scaffolds shall be used in places where workers, from the ground or a solid structure, are unable to perform their work. Devices designed and made for lifting persons may also be used.

35. Conditions of usage: Scaffolds shall be designed for the type of work to be performed and the probable risks. They shall meet these conditions:

(a) be so designed, constructed, trussed, braced and maintained as to support any loads and stresses they may be subjected to, and resist wind action;

(b) have a safety factor of at least 4 for each constituent element (the ratio between the breaking load and the maximum working load shall not be lower than 4);

(c) rest on firm ground or foundations;

(d) be provided with guard-rails if used over 3 metres from the ground.

DIVISION IV EMERGENCY SAFETY PRECAUTIONS

36. Evacuation plan: In any establishment, an emergency evacuation plan shall be drawn up and be in force, if applicable.

37. Drills: Rescue and evacuation drills shall be held periodically based on the risk an establishment presents.

Nonetheless, in establishments containing highly combustible, flammable or explosive substances in sufficient quantity to constitute a specific risk of fire and having 10 workers or more, at least one evacuation drill shall be held each year.

38. Portable extinguishers: Portable fire extinguishers shall be installed in any building not equipped with automatic extinguishers or fire hoses and any area involving localised fire hazards.

39. Conditions of usage: Portable fire extinguishers shall:

(a) be approved by Underwriters Laboratories of Canada (U.L.C.);

(b) provide special protection according to the nature of the current hazard;

(c) be filled after use;

(d) bear the name of the person entrusted therewith and the date of the last inspection.

40. Installation: The choice, installation, utilisation and maintenance of these portable fire extinguishers shall comply with the NFPA-10 Portable Fire Extinguishers standard, applicable according to the year the extinguishers were installed.

41. Emergency systems: Emergency systems such as service lighting and alarms shall always be operational.

DIVISION V AIR QUALITY

42. Replacement: Insofar as possible, dangerous substances such as dusts, fumes, mists, vapours or gas shall be replaced with substances that are not hazardous.

43. Oxygen: Subject to section 49, the percentage in volume of airborne oxygen at any work station of an establishment shall not be less than 19.5 % at normal atmospheric pressure.

44. Standards: Subject to section 49, any establishment whose operation could cause the emission of gases, dusts, fumes, vapours and mists into the work area shall be operated so that the concentration of any gas, dust, fume, vapour or mist does not exceed, in the workers' breathing area, the standards provided for in Schedule A for any time period specified therein.

The use of crocidolite or amosite or of a product containing either of these substances is prohibited, except where their replacement is not reasonable or practicable.

Such an establishment shall be designed, built, fitted or provided with a venting system for gases, dusts, fumes, vapours or mists that comply with the standards provided in the first paragraph.

The first paragraph also applies to any workstation located in a vehicle used for purposes other than agricultural, wherever it may be.

45. Carcinogenic and isocyanate substances: Where a worker is exposed to any substance listed under Schedule I as having a carcinogenic effect demonstrated or suspected in humans or as being diisocyanate or isocyanate oligomers, such exposure shall be reduced to the minimum, even when it remains within the standards provided under this Schedule.

46. Methods: Dusts, gases, fumes, vapours and mists found in the workplace environment shall be measured in the workers' breathing area or, if this proves to be impossible owing to the lack of equipment for taking a sampling from this area, then outside the breathing area but in a place located as close as possible to such area.

These dusts, gases, fumes, vapours and mists found in the workplace environment shall be sampled and analysed to obtain a precision equal to the methods described in the Sampling Guide for Air Contaminants published by

the laboratories administration of the Institut de recherche en santé et sécurité du travail du Québec, as it reads at the time that it applies.

The sampling strategy for these contaminants shall be carried out in accordance with ordinary practices in industrial hygiene as summarised in the aforementioned guide.

47. Underground construction sites: In an underground construction site, carbon monoxide (CO) and nitrogen dioxide (NO₂) shall be measured at least twice a day where equipment is used or where activities take place in which these gases are likely to be emitted. One such measurement of the gases shall take place one hour after the first shift begins.

These records shall be kept for the duration of the construction site.

48. Measurement: An establishment that employs 50 workers or more where the concentration of gases, dusts, fumes, vapours or mists in the establishment exceeds or could exceed the standards prescribed in Schedule I at a work station, the concentration of such gases, dusts, fumes, vapours or mists emitted into the work environment concerned shall be measured at least once a year, in compliance with paragraph 1 of section 46.

Nonetheless, in any establishment where workers are exposed to asbestos, the concentration of airborne asbestos dust and the concentration of respirable asbestos fibres in the workers' breathing area shall also be measured at least once a year. A sampling strategy may, however, provide for more frequent measuring, depending on the extent of the risk to the health, safety or physical well-being of the workers.

These measurements shall also be carried out each time there is a change in industrial processes or each time facilities are installed for improving the quality of the air in the work environment of the establishment.

The results of any measurement of the quality of the air taken in the work environment by the employer shall be entered in a register that shall be kept by the employer for 5 years.

DIVISION VI INDIVIDUAL PROTECTIVE BREATHING EQUIPMENT

49. Protective equipment: Where existing technology prevents an employer from complying with sections 43 and 44, and for work involving maintenance, inspection or repairs outside the workshop, or transportation

where the standards provided for in sections 43 and 44 are not complied with or, where the technology exists, while waiting for the measures required for compliance with those sections to be implemented, the employer must provide the worker free-of-charge with equipment for protecting respiratory passages, as indicated in the Guide des respirateurs utilisés au Québec, published by the Institut de recherche en santé et en sécurité du travail, as it reads at the time that it applies.

The equipment shall be selected, adjusted, used and cared for in accordance with the CSA Standard Z94.4-93 entitled "Selection, Use and Care of Respirators."

Notwithstanding the foregoing, where the exposure of a worker to asbestos does not exceed 5 times the time-weighted average exposure value, the employer may provide him with a mask certified at a minimum FFP2, pursuant to the EN- 149 Standard of the European Committee for Standardisation, by a laboratory accredited by the latter. In such case, the employer shall make sure that the worker wears this equipment.

The preceding provision in no way diminishes the employer's obligation to reduce at the source the dangers to workers' health, safety and physical well-being.

50. Prohibition: Notwithstanding section 49, an employer may not provide the worker with a self-contained or air-supplied protective breathing apparatus equipped with an automatic device which interrupts or restricts the air supply in the part of the apparatus covering the face.

51. Use of protective equipment: The equipment for protecting respiratory passages prescribed in section 49 shall be:

- (a) designed to protect the worker from the danger for which the protection is intended;
- (b) kept in proper working order;
- (c) inspected at least once a month and each time the worker using the equipment reports to his employer that it is not working properly;
- (d) sanitised before being used by another worker, except in an emergency; and
- (e) stored in a clean place.

The principles of operation and the use of the equipment shall be explained to the workers, and the employer shall ensure that its use is fully understood by the workers.

52. Air supply: Breathable compressed air that supplies respiratory protection devices of the types flow air line respirators or self-contained breathing apparatuses referred to under section 49 as well as the production facilities and the distribution systems for such air, shall comply with the CSA Standard Z180.1-M85 Compressed Breathing Air and Systems.

Samples of this air shall be taken and analysed to obtain a precision equal to the methods described in the Sampling Guide for Air Contaminants published by the laboratories administration of the Institut de recherche en santé et sécurité du travail du Québec, as it reads at the time that it applies. The results of these analyses shall be entered in a register that shall be kept for a period of at least 5 years.

Breathable compressed air supply and distribution systems shall be maintained in compliance with the manufacturers' instructions. The date on which such maintenance is performed as well as the name of the person who performed it shall be recorded in a register that shall be kept for a period of at least 5 years.

DIVISION VII FLAMMABLE VAPOURS AND GASES

53. Lower explosion limit: The concentration of inflammable vapours or gases in a building or other workplace that is not an enclosed area shall be kept below 25 % of the lower explosion limit.

54. Flammable source: No flammable source shall be allowed either inside or outside, where the concentration of flammable gases or vapours is equal to or exceeds 25 % of the lower explosion limit.

55. Prohibition: Smoking in any area where flammable vapours or gases are in concentrations equal to or above 25 % of the lower explosion limit is prohibited.

56. Grounding: Any equipment in areas containing flammable vapours or gases shall be grounded.

57. Ventilation system: Any ventilation system for removing flammable vapours or gases, combustible pulverised substances or any other suspended substance that may cause an explosion shall:

- (a) be made of non-combustible substances;
- (b) use ventilators whose rotating parts are made of materials that do not produce sparks;
- (c) have all metallic components grounded;

(d) be equipped with air-tight exhaust conduits oriented directly towards the outdoors without ever passing through an intermediate room, and built to resist explosions.

DIVISION VIII SOLID COMBUSTIBLES

58. Preventive cleaning: All rooms where combustible dusts are generated shall be cleaned as often as necessary to prevent the accumulation of dusts on floors, beams, equipment, and machines, in quantities that can present a fire or explosion hazard.

59. Grounding: Any equipment in rooms where combustible dusts are generated shall be grounded.

60. Flammable source: No flammable source is permitted in areas presenting a danger of an explosion due to dust. Smoking is prohibited.

61. Risk of explosion: Machines and equipment offering danger of an explosion due to dust, shall be so located, constructed, enclosed or purged as to protect employees near such machines or equipment.

62. Dust collectors: Dust collectors for combustible dusts offering an explosion hazard shall be:

(a) located outside or in isolated areas

(b) provided with explosion vents in accordance with the provisions of the Guide for Venting of Deflagrations, NFPA 68-1994. Vents currently installed in collectors at the date that this regulation comes into force may also be used providing they comply with a previous version of this standard and are in good condition.

63. Silos: Silos used for storing dry combustible substance shall be:

(a) made of fire resistant materials;

(b) equipped with covers and adequate ventilation;

(c) equipped with explosion vents complying the standard Guide for Venting of Deflagrations, NFPA 68-1994, where there is a risk of explosion. Vents currently installed in silos at the date that this regulation comes into force may also be used providing they comply with a previous version of this standard and are in good condition.

DIVISION IX
SPECIAL PROVISIONS CONCERNING VARIOUS
DANGEROUS SUBSTANCES

64. Facility or equipment alterations: An employer who makes alterations to facilities or equipment in an establishment that could cause the emitting of asbestos dust has in this respect the same obligations as those recognised in the Construction Works Safety Code (R.R.Q., 1981, c. S-2.1, r.6) as it stands at the time it is applied, to an employer, as if such works were carried out on a construction site.

The establishment is then classified in accordance with the type of works performed therein under one of the construction categories determined under section 3.23.2 of this Code.

65. Dust or scraps: Any asbestos dust or scraps of crumbling material whose concentration of asbestos is at least 0.1 %, shall be stored and transported in a sealed container.

A label shall be affixed to any sealed container in the preceding paragraph. The label shall permanently include the following indications and be easily legible:

- (a) material containing asbestos;
- (b) toxic if inhaled;
- (c) keep container tightly closed;
- (d) do not inhale the dust.

66. Protective suit: The employer must supply a protective suit to any worker whose personal clothing risks being contaminated by chrysotile asbestos fibres from exposure thereto while performing his duties.

The employer shall ensure the care of this protective suit that shall not be worn away from the workplace.

67. Lead: The salvaging of lead or lead products and other adjacent operations shall be performed inside an establishment in compliance with the requirements under section 110.

68. Floor: In any establishment where lead, mercury or their compounds are handled, stored or used in either a solid or liquid form, the floor covering shall be made of a non-porous material.

69. Protective clothing: The employer shall make sure that workers wear protective clothing used exclusively for their work when performing any of the following activities:

- (a) the recovery of lead or lead product font;
- (b) the manufacturing of lead batteries;
- (c) the manufacturing of lead powders or salts, chlorine, fluorescent lamps or caustic soda where workers shall handle lead or mercury;
- (d) any task requiring exposure to crocidolite asbestos, amosite or any other type of amphibole;
- (e) any task requiring exposure to chrysotile asbestos fibres that cannot be contained within the exposure value levels specified in Schedule I.

Before reuse, the employer shall ensure that such clothing has been cleaned with a vacuum equipped with a high-efficiency filter, unless the clothing has been washed.

70. Double changing room: Two separate lockers: one for the worker's street clothes and the other for his work clothes shall be put at his disposal in an establishment where workers are exposed to lead, mercury, asbestos or beryllium or their compounds, in the form of steam or dust.

These lockers shall be placed in 2 separate rooms used exclusively for that purpose, between which a shower room shall be installed so that the workers may take a shower before putting on their street clothes. The storage space of each locker shall be at least 0,14 cubic metres, and there shall be a clearance of at least 600 millimetres in front of each row of lockers.

In establishments referred to in the first paragraph, workers may not wear their work clothes elsewhere than on the work premises.

71. Abrasive blast cleaning: Any industrial cleaning operation using abrasive air blasting inside an establishment shall be carried out in an isolated room or booth ventilated by extraction.

72. Other protective equipment: Besides the requirements provided under section 71, the employer shall make sure that any worker exposed to dust raised by abrasive air blast cleaning wears an air-supplied abrasive hood, gloves, leg protectors and clothing designed to ensure protection from dust and abrasive or metal projections. This equipment shall be put at the workers disposal by the employer.

The worker shall put on, remove and store the protective equipment described in the first paragraph away from the place where the abrasive air blast cleaning is being carried out.

DIVISION X
STORAGE AND HANDLING OF DANGEROUS
SUBSTANCES

§1. Interpretation and general provisions

73. Definition: In this section, “controlled product” means a product controlled within the meaning of the Regulation respecting information concerning controlled products, approved by Order-in-Council 445-89 dated March 22, 1989.

74. Dangerous substances: In this section, “dangerous substance” designates a substance that is either a controlled product or substance that appears on the list in Schedule II and that belongs to one of the following categories:

- (a) compressed gases;
- (b) flammable and combustible substances;
- (c) combustive substances;
- (d) toxic substances;
- (e) corrosive substances;
- (f) dangerously reactive substances.

75. Safety precautions: The storage and handling of dangerous substances shall be so controlled as to prevent accidental spillage or lighting of these substances. The following precautions shall be taken:

- (a) separating or isolating any dangerous substances which when mixed with other substances, may cause a fire or an explosion, or may discharge flammable or poisonous gases;
- (b) keeping containers, piping and other apparatus in good working order;
- (c) immediately clean any dangerous substance spilled on floors or shelves;
- (d) when pouring from one container to another, use a secure recipient by taking into account the type of dangerous substance being poured;
- (e) depending on the category in which the dangerous substance is classified, it shall comply with sections 76 to 101.

§2. Compressed gases

76. Compressed gas cylinders: All compressed gas cylinders shall:

- (a) comply with the Act respecting pressure vessels (R.S.Q., c. A-20.01) and its regulations, as they stand when applied;
- (b) be kept apart from any source of heat that could cause the temperature of the container to rise beyond 55 °C;
- (c) be used only for the purposes for which they were designed

- (d) not be handled in a manner that could damage them and be fastened upright or held in a cart when being used.

77. Storage of a compressed gas cylinder: Whenever a compressed gas cylinder is not being used:

- (a) it should be kept in an upright position solidly held in place with the valves facing upwards;
- (b) the protective cap for the valves shall be set in place.

78. Compressed gas cylinders in series: Compressed gas cylinders linked in a series via a collector shall be supported, held together and form a unit by means of a rack or other frame designed for such purpose and the cocks and safety valves shall be secure from being bumped or knocked.

79. Prohibition: The protective cap or a valve collar shall not be used for raising a compressed gas cylinder unless the collar has been specifically designed for such purpose.

80. Propane gas: Any propane gas cylinder that is not connected to be used shall be stored in accordance with the Propane Installation Code, CAN/CSA B149.2-M91.

Notwithstanding the preceding, non-reusable propane gas cylinders shall be stored in compliance with paragraph 9.5.6 of this code.

§3. Flammable and combustible substances

81. Storage: Flammable and combustible substances shall be stored:

- (a) away from areas with high fire hazards;

(b) away from combustive substances or powerful oxidising agents.

82. Liquid state flammables and combustibles: The storage, handling and use of liquid state flammables and combustibles shall be carried out in accordance with the standard Flammable and Combustible Liquids Code NFPA 30-1996.

In the case of buildings in existence on the date this regulation comes into force, the employer may, however, take precautions that ensure safety equivalent to that which is prescribed in this standard.

83. Gaseous state flammable substances: Gaseous state flammable substances such as ammonia gas, hydrogen, acetylene and hydrogen sulphide shall never be stored with combustive substances or with oxidising agents in a gaseous state such as chlorine, fluorine, nitrogen dioxide, nitrous oxides, nitrogen tetroxide, oxygen and compressed air.

84. Reactive substances flammable in contact with air: Reactive substances that are flammable in contact with air to the extent of burning shall be kept either:

- (a) under an inert liquid;
- (b) in an inert atmosphere;
- (c) in sealed recipients.

85. Reactive substances flammable in contact with water: Reactive substances that are flammable in contact with water shall be stored:

- (a) in closed recipients;
- (b) away from sources of humidity;
- (c) away from plumbing with condensation or drippings.

§4. Combustive substances

86. Interpretation: For the purposes of sections 87 to 91, powerful oxidising agents such as chlorine and fluorine are considered to be combustive substances.

87. Storage: Combustive substances shall be stored away from substances with which they may react and especially from the following substances:

- (a) a corrosive substance with which they may react by exploding;
- (b) metallic powder;

(c) organic substances;

(d) substance which oxidises easily, including wood surfaces.

88. Containers for combustive substances: Containers having combustive substances shall:

- (a) be kept closed;
- (b) have their contents clearly identified;
- (c) be kept in cool, dry places;

(d) be stored away from toxic substances or flammable and combustible substances.

89. Gaseous state combustive substances: Gaseous state combustive substances shall never be stored with gaseous state flammable substances.

90. Grounding: Equipment used for processing or handling combustive substances such as peroxides, nitrates and chlorates shall be grounded.

91. Contaminated clothing: Clothing contaminated by combustive substances shall be removed immediately and washed before being worn again.

§5. Toxic substances

92. Storage: Toxic substances shall be stored

- (a) away from areas of high fire hazard and from heat sources;
- (b) away from combustive substances and powerful oxidising agents;
- (c) in cool and well ventilated areas.

93. Containers for corrosive substances: Reservoirs and vats containing liquid state toxic substances shall be provided with overflow prevention devices.

Level indicators on such open reservoirs and vats shall be provided with protective screens.

94. Emergency showers and eyes washers: Emergency showers and eyes washers shall be put at the disposal of workers exposed to liquid or solid state toxic substances.

These showers shall be installed in the immediate area of exposed workers.

95. Identification of cylinders: Any cylinder containing a gaseous state toxic substance shall be clearly identified.

96. Posting warnings: A warning indicating the type of danger shall be posted at all entrances where a gaseous state toxic substance is stored.

§6. Corrosive substances

97. Storage: Corrosive substances shall be stored:

- (a) away from areas with high fire hazards;
- (b) away from combustible substances and powerful oxidising agents;
- (c) protected against direct solar rays;
- (d) in cool and well ventilated areas.

98. Containers for corrosive substances: Containers for corrosive substances shall be:

- (a) kept closed;
- (b) have their contents clearly identified;
- (c) handled with care.

99. Overflow prevention devices: Reservoirs and vats containing liquid state corrosive substances shall be provided with an overflow prevention device.

Level indicators on such open reservoirs and vats shall be provided with protective screens.

100. Emergency showers and eyes washers: Emergency showers and eyes washers shall be put at the disposal of workers exposed to liquid or solid state corrosive substances.

These showers shall be installed in the immediate area of exposed workers.

§7. Dangerously reactive substances

101. Storage: Dangerously reactive substances and substances that could trigger a violent polymerisation, decomposition or condensation reaction due to vibrations, light or sound waves shall be stored separately, well protected and stabilised, as the case may be.

**DIVISION XI
HOT LIQUIDS**

102. Monitoring devices: All open containers in which non-corrosive liquids having a temperature exceeding 60 °C are agitated or heated shall have their monitoring devices isolated or guarded by a screen to protect workers against splashes.

103. Level indicators: Level indicators on reservoirs, vats or other containers with hot liquids shall be provided with protective screens.

**DIVISION XII
VENTILATION AND HEATING**

104. Necessity: Establishments shall be adequately ventilated either by natural or mechanical means, and excessive air draughts shall be avoided.

Ventilation systems and devices in service shall be designed, manufactured and installed in compliance with state-of-the-art techniques then current at the time of their design, manufacturing and installation.

In addition, any work station shall be ventilated as to comply with the standards provided under sections 43 and 44, with the exception of work stations assigned to out-of-shop inspections, maintenance or repairs.

105. Natural ventilation: In any establishment where overall ventilation is provided by natural means, it shall be obtained by means of windows, shutters or vents having a ventilation area at least equal to the percentage of floor area indicated in the following table, according to the type of establishment in question:

Type of establishment	Percentage of floor area
Laboratories and office buildings	5 %
Any other establishment	2 %

For the purposes of this section, floor area does not include stairwells and other vertical empty spaces.

106. Air changes: Any mechanical ventilation system installed in an establishment shall be able to furnish a minimum number of fresh air changes at the time indicated in Schedule III, in accordance with the category or use of the establishment or any of its parts.

107. Inspection: Mechanical ventilation systems shall be inspected and adjusted at least once a year with the filters maintained or replaced as the need arises.

108. Ducts: Ducts serving to transport contaminated air shall not be used for any other purpose, so as not to risk contaminating the workplace.

109. Air intakes: Air intakes shall be so placed as not to introduce into the establishment air that is already contaminated or unhealthy.

110. Local ventilation: Any localised source in a stationary work environment that emits dusts, gases, fumes, vapours or mists shall be equipped with a local exhaust ventilation system for trapping the dusts, gases, fumes, vapours or mists at their source.

111. Recirculation of air: Any air recirculation system shall be designed to that:

(a) the concentration of dusts, fumes, gases, vapours and mists in any work station is lower than the weighted average exposure value permissible in the work environment and the permissible recirculation concentration provided for in Schedule I;

(b) a duct is provided for evacuating contaminated air outside the establishment in case the air filtering system breaks down or is not working properly;

(c) no dust, fumes or mists are discharged into a room where no dusts, fumes or mists are present before the air recirculation system is put into operation; and,

(d) there is no recirculation of gases, vapours, mists, fumes or dusts which are identified under Schedule I as a substance whose recirculation is prohibited or for which this Schedule provides a maximum limit.

112. Fresh air intake: Subject to section 111, an establishment ventilated mechanically shall be equipped with a fresh air intake system designed to replace the volume of air evacuated from the work environment with fresh air from the atmosphere.

The fresh air intake shall be situated so that no air already evacuated from an establishment is reintroduced.

113. Adjacent facilities: All establishments shall be designed, built, equipped and operated so that they do not emit gases, dusts, fumes, vapours, odours or mists through ceilings, walls, floors, corridors, stairwells, or freight or passenger elevator hoistways into any building or facility adjacent to the establishment.

114. Ventilation of locker rooms and toilets: During the hours of operation of an establishment, the locker rooms and washrooms shall be ventilated toward the outside of the establishment, either naturally in accordance

with section 105, or mechanically by extraction in accordance with the standards prescribed in the following table:

Place	Ventilation (in cubic meters of air per hour)	
Locker rooms	hooks or lockers for street clothes or unsoiled work clothes	18 m ³ /h, per square meter of the room's surface area.
	hooks or lockers for damp work clothes (drying facilities)	the greater of: 36 m ³ /h, per square meter of the room's surface area, or 12 m ³ /h, per locker.
Toilets and urinals	the greater of: -36 m ³ /h, per square meter of the room's surface area, or -45 m ³ /h, per toilet or urinals, but not less than 350 m ³ /h.	
Showers	the greater of: -36 m ³ /h, per square meter of the room's surface area, or -90 m ³ /h, per shower head, but not less than 350 m ³ /h.	

Where a washroom is ventilated naturally, the ventilation area per toilet shall be 0,1 square metres.

115. Ventilation of a dining room: Where a lunch room is put at the disposal of workers for eating their meals, the room shall be ventilated naturally in accordance with the standards applicable to laboratories and to office buildings prescribed in section 105 or ventilated mechanically by the addition of air at the rate of 20 cubic metres of air per hour per worker in accordance with section 112.

Where a stove is used for the cooking of food, the lunch room shall be provided with a hood for evacuating smoke and odours into the atmosphere outside the establishment.

This section does not apply to facilities used for office space purposes.

116. Air supply in underground operations: Any underground construction site shall be supplied with fresh air at the rate of a minimum air supply equivalent to the greatest value of the following requirements:

(a) 5,50 cubic metres of fresh air per minute for each underground worker;

(b) 15 cubic metres per minute for each square metre of section for tunnels;

(c) where mobile equipment with a diesel-powered engine is used, any air supply prescribed for the equipment listed in Schedule 24 and Schedule 31 of the United States Bureau of Mines or, for equipment not listed in the said documents, 5,50 cubic metres per minute per kilowatt measured at the motor shaft.

Where several mobile machines with diesel-powered engines are used in the same ventilation circuit at the same time, the total quantity of fresh air shall be 100 % of the given supply for the most stringent unit from the point of view of ventilation, 75 % of the given supply for the second unit, and 50 % of the given supply for each additional unit.

117. Sulphur content: The sulphur content of a diesel fuel used for any equipment or vehicle in an underground construction site shall be less than 0,25 %.

118. Ventilation of underground operations: Ventilators shall operate at all times when workers are in an underground construction site. If the ventilators are stopped while the workplace is unoccupied, they shall be put back into operation before the following shift of workers arrives to ensure at least one air change before the workers reach their work station.

In the event that the ventilation system on such a construction site breaks down, a warning system shall also be installed to interrupt the firing of explosives or to warn the driver of an internal combustion motor vehicle to stop the engine.

119. Prohibited access: Access to any unventilated section of an underground construction site shall be prohibited to workers.

120. Surface vehicles: For any underground construction site, motor vehicles not used underground may not come nearer or be kept at less than 15 metres from any entrance shaft or other opening connected to the underground worksite unless the motor vehicles comply with section 121 to 122 or unless a ventilation system that prevents combustion gases from entering the construction site is installed.

This section does not apply to electric motor vehicles.

121. Vehicles with internal combustion engines: In an underground construction site, any motor vehicle with an internal combustion engine shall, except for the case provided for in section 122:

(a) be equipped with a diesel engine;

(b) not emit undiluted exhaust gases containing more than 0,25 % carbon monoxide into the air;

(c) not continuously emit black fumes into the air;

(d) be equipped with a scrubber that enables exhaust gases to be kept at 83 °C independently of the operating regime of the engine;

(e) circulate within an area in accordance with the standards prescribed in subparagraph 3 of the first paragraph of section 116.

122. Vehicles used for supervising underground operations: In an underground construction site, any motor vehicle with a gasoline-powered engine used for supervising operations shall:

(a) have an engine with a capacity of less than 6 litres;

(b) be equipped with an emission control device in accordance with the standards prescribed in the Motor Vehicle Safety Regulations (C.R.C., c. 1038) made under the Motor Vehicle Safety Act (R.S.C., 1970, 1st, Supp., c. 26) with the same efficiency of performance that it had initially;

(c) have a maximum gross mass of 2,720 kilograms.

When such a vehicle stops in an underground construction site, its driver shall turn off the engine.

123. Combustion products: Except in the cases provided for in sections 124 to 126, combustion products vented by the air heating facilities of an establishment shall be evacuated directly outside the establishment by means of a duct.

124. Infrared heating: In any establishment heated by a gas-fired infrared device, air contaminated by combustion gases shall be evacuated outside by natural or mechanical ventilation at the minimum rate of $\frac{9 \text{ m}^3/\text{h}}{\text{MJ/h}}$

125. Make-up air heaters: Any make-up air heater used in an establishment and operated with natural or propane gas shall comply with CGA Standard 3.7-1976 of the Canadian Gas Association published in a document entitled Direct Gas-Fired Non-Recirculating Make-up Air Heaters and with the standards prescribed in subparagraph a of the first paragraph of section 126.

126. Construction site radiators: Any radiator used on a construction site and operated with propane or natural gas shall:

(a) comply with the standards of the Installation Code for natural gas burning appliances and equipment and the Installation Code for propane burning appliances and equipment as made mandatory by Order in Council 174-80 dated 23 January 1980;

(b) not discharge gases into the work environment that would cause the concentration of gas to exceed the standards prescribed in the first paragraph of section 44.

Subparagraph *b* of the first paragraph also applies to oil-operated radiators used on construction sites.

DIVISION XIII HEATING ENVIRONMENT

127. Temperature: In any establishment, the minimum temperature that shall be kept is that which is prescribed in Schedule IV for any stationary work station inside a building according to the type of work performed, except if the purpose for which the rooms are used or the nature of a process or of the products handled requires a cooler temperature, unless the work station is a motor vehicle, or the work involves maintenance, inspection or repairs outside the workshop.

128. Lunch room: Where a lunch room is put at the disposal of workers for eating their meals, the room shall be kept at a minimum temperature of 20 °C.

This section does not apply to facilities used as offices.

129. Relative humidity: A relative humidity percentage of at least 20 % shall be maintained during business hours in any office building or commercial establishment built or operated after December 19, 1979.

130. Measuring humidity: The humidity in an establishment is measured with a psychrometer or hygrometer.

DIVISION XIV HEAT STRESS

131. Compulsory measurements: In any establishment employing 50 workers or more where workers are exposed to heat stress conditions in which the heat stress index reaches or exceeds the continuous work curve in the graph of Schedule V, this index shall be measured twice a year, once during the summer, at each work station where the index is reached or exceeded.

The measurements obtained in accordance with the first paragraph shall be entered in a register. The register shall be kept for at least 5 years.

132. Method: For the purposes of enforcing this Regulation, the heat stress index is measured by the Wet BulbGlobe Temperature Index (W.B.G.T. method) as provided for in Heating & Cooling for Man in Industry, 2nd Edition, published in 1975 by the American Industrial Hygiene Association and in Schedule V.

133. Index greater than the continuous work curve: In any establishment where workers are exposed to heat stress conditions so that the heat stress index exceeds the continuous work curve in the graph of Schedule V, the employer shall ensure that the workers thus exposed undergo medical supervision and shall provide them with water of a temperature of between 10 °C and 15 °C, salt, and one shower per 15 exposed workers.

134. Special measures: In any establishment where workers are exposed to heat stress conditions so that the heat stress index exceeds the continuous work curve in the graph of Schedule V, the following measures shall be taken:

(a) re-equipping the exposed work station with reflecting screens, additional insulation or ventilation to reduce the heat stress index of the work station to a value less than or equal to the values of the continuous work curve;

(b) if enforcement of paragraph *a* proves impossible or does not allow the continuous work curve to be reached and the controlling of the work load, the time of exposure and the rest time in accordance with the alternate work-rest regimen prescribed for that purpose in Schedule V;

(c) if enforcement of paragraphs *a* and *b* proves impossible or does not allow the curves in the graph of Schedule V to be reached, or until the changes stipulated in paragraph *a* are made, ensure that the workers wear clothing and use equipment in accordance with that described in the publication specified in section 132.

DIVISION XV LIGHTING

135. Illumination levels: Every establishment shall be provided with natural or artificial lighting at any work station or other place in the establishment where workers circulate in order to provide the illumination levels stipulated in Schedule VI.

136. Method of measurement: For the purpose of enforcing section 135, the illumination level shall be measured at a distance of 750 millimetres from the floor on the usable work surface, with a luxmeter corrected for incident light rays.

137. Access: Access or passages reserved for pedestrian traffic that give access to a building shall have at least a level of illumination of 5 lux at ground level.

138. Lunch room: Where a lunch room is put at the disposal of workers for eating their meals, the room shall have a minimum level of illumination of 250 lux.

This section does not apply to facilities used for office space purposes.

139. Toilets: In any establishment, toilet facilities shall have a minimum level of illumination of 250 lux.

140. Exception: This section does not apply to tasks that by their very nature shall be performed without illumination or under controlled lighting conditions.

DIVISION XVI NOISE

141. Operations and organisation: Any establishment the operation of which is likely to emit noise at the workers' auditory level shall be operated in accordance with section 147 so that the noise measured at any work station does not exceed the standards prescribed in sections 142 to 146 for any time period indicated therein.

An establishment shall be designed, constructed or equipped so that the standards and requirements prescribed in the first paragraph are complied with and so that the ceilings, walls, floors, corridors, stairwells, or freight or passenger elevator hoistways of the establishment do not emit noise toward any building or facility adjacent to the establishment.

142. Continuous noise: No worker in an establishment may be exposed to the continuous noise levels prescribed below during a time period longer than that indicated in the following table:

Sound level (in dBA, corrected dBA or dBA equivalent)	Duration of exposure* permitted (hours per day)
85	16
86	13,9
87	12,1
88	10,6
89	9,2
90	8
91	7
92	6
93	5,3
94	4,6
95	4
96	3,5
97	3
98	2,6
99	2,3
100	2
101	1,75
102	1,50
103	1,3
104	1,2
105	1
106	0,9
107	0,8
108	0,7
109	0,6
110	0,5
111	0,45
112	0,4
113	0,35
114	0,30
115	0,25
>115	0

* this includes any continuous exposure or number of short term exposures during a worker's work period.

The permitted duration of exposure for any worker at any sound level indicated on the preceding table is reduced by one half, effective from a date to be determined by a regulation made in accordance with section 223 of the Act respecting occupational health and safety (R.S.Q., c. S-2.1).

143. Continuous noises at different levels: Where a worker is exposed to continuous noises at different levels, the combined effect of those levels shall be computed by using one of the following methods:

(a) by adding the following fractions

$$\frac{C_1}{T_1} + \frac{C_2}{T_2} + \dots + \frac{C_m}{T_m}$$

where C indicates total duration in hours of exposure at a specific level and where T indicates the total dura-

tion in hours of exposure permitted in accordance with section 142;

(b) by computing the equivalent sound level in dBA equivalent with the following formula:

$$L_{eq} = 16,61 \log_{10} \frac{1}{T} \int_0^T 10^{L(t)/16,61} dt,$$

where: L_{eq} = equivalent sound level
 L = instantaneous sound level in dBA
 T = total duration of worker's exposure, expressed in hours and by using the sound level thus obtained to apply the table under section 142.

Where the method of computation specified in subparagraph 1 of the first paragraph is used, a worker shall not be exposed to a sound level so that the sum of the fractions exceeds unity.

The computations specified in this evaluation shall not include any exposure of a worker to a sound level of less than 85 dBA.

144. Predominant frequency band: Where a continuous noise includes predominant frequency bands, the continuous level shall be computed in corrected dBA in accordance with the method prescribed in Schedule VII.

145. Impact noise: In an establishment, the daily exposure of a worker to impact noise shall not exceed the number indicated in the following table

Sound level in dB linear as peak value	Permitted number of impacts (per 8 hours)
120	10 000
121	7 943
122	6 310
123	5 012
124	3 981
125	3 162
126	2 512
127	1 995
128	1 585
129	1 259
130	1 000
131	794
132	631
133	501
134	398
135	316
136	251
137	200
138	158
139	126
140	100
> 140	0

146. Impact noises on different levels: Where a worker is exposed to impact noises on different levels, the combined effect of these levels shall be computed by using one of the following methods:

1° by adding the following fractions:

$$\frac{C_1}{N_1} + \frac{C_2}{N_2} + \dots + \frac{C_m}{N_m},$$

where C indicates the total number of impacts at a specific level, and N indicates the total number of impacts permitted in accordance with section 145.

2° by computing the equivalent level in dB linear peak value with the following formula:

$$L_{eq} = 10 \log_{10} \frac{1}{N} \sum_{n=0}^N 10^{L(n)/10} n$$

$$SEA = L_{eq} + 10 \log N$$

where: SEA = sum of acoustic energies
 L_{eq} = equivalent level of impact noises
 L_n = impact noise level in dB linear peak value
 N = total number of impact noises to which a worker is exposed per day
 n = number of impact noises for each sound level of impact noises

Where the method of computation specified in subparagraph 1 of the first paragraph is used, a worker shall not be exposed to a sound level so that the sum of the fractions exceeds unity.

Where the measurements are taken pursuant to subparagraph 2 of the first paragraph, a worker shall not be exposed to impact noises so that the SAE exceeds 160 or so that the peak value in dB linear exceeds 140.

The computations in this evaluation shall not include any exposure of a worker to a sound level of less than 120 dB linear as peak value.

147. Corrective measures and individual protective equipment: To comply with the standards established under sections 142 to 146, the measures indicated hereafter shall be taken in the following order:

- by reducing the noise at its source;
- by isolating any work station exposed to the noise;
- by insulating the work areas acoustically.

When, in taking the measures presented in the first paragraph, it proves to be impossible to comply with the standards prescribed in sections 142 to 146 or until the changes stipulated in the said paragraph are made, the employer shall put hearing protectors at the workers' disposal or shall limit the time that they are exposed to noise, in conjunction with an audiometric testing programme.

The measures stipulated in the first paragraph shall be implemented, even if the employer is unsuccessful in complying with the standards prescribed under sections 142 to 146.

148. Hearing protectors: Any hearing protector provided to a worker in accordance with the second paragraph of section 147 shall reduce the noise so that the worker is no longer exposed to noises that exceed the standards established in sections 142 to 146.

These hearing protectors shall comply with the CSA Standard Z.94.1-1974 entitled Hearing Protectors.

They shall also be sanitised before being used by another worker, except in the case of an emergency.

149. Posting of notices: Where a worker is exposed to noises that exceed the standards established in sections 142 to 146, a poster indicating that the wearing of ear protectors is mandatory, shall be displayed near the work station or room where the worker is assigned. If the notice includes characters, the latter shall be at least 30 millimetres high.

150. Measuring devices: For the purpose of enforcing this Division, the sound level shall be measured with a Type 2 sound level meter for general use or a Type 1 sound level meter for precision purposes as prescribed in CSA Standard Specifications for Sound Level meters Z.107.1-1973.

Devices used to determine predominant frequency bands shall comply with CSA Standard Z.107.5-1975 entitled Octave, Half-Octave and Third Octave Band Filter Sets.

151. Measurement methods: For the purposes of enforcing this Division, except for the case provided for in section 144, the noise shall be measured in accordance with CSA Standard Z.107.2-1973 entitled Methods for the Measurement of Sound Pressure Levels.

152. Measurement of noise: Noise emitted at a workstation shall be measured at least once a year in any establishment that employs 50 workers or more and where such noise is likely to exceed the standards prescribed in sections 142 to 146.

These measurements shall also be taken within 30 days after a change in industrial processes or equipment or after the installation of devices for reducing the levels of noises emitted at a work station. The measurements taken in accordance with this section shall be entered in a register and kept for a period of 5 years.

DIVISION XVII HAZARDOUS RADIATIONS

153. Protective devices: All intense infra-red radiation sources shall be shielded by one of the following devices:

- (a) heat absorbent screens;
- (b) water screens; or
- (c) any other devices to protect workers.

154. Protective means: In areas where operations producing dangerous emanations of ultra-violet radiations such as electrical welding are carried out, the following precautions shall be taken:

- (a) enclose the emanation sources with protective screens;
- (b) protect the hands and forearms of workers exposed to appreciable doses with gloves or protective creams; and,
- (c) protect eyes and face as required under section 348.

155. Radioactive substances: The use, handling and transportation of radioactive substances shall be performed in accordance with the regulations prescribed by the Atomic Energy Control Commission of Canada.

156. Limits of exposure: workers shall not be exposed to a dose of ionising radiation that exceeds the limits set forth by the Atomic Energy Control Commission of Canada.

157. Dosimeter monitoring: workers assigned directly to tasks where they could be exposed to ionising radiation shall be monitored by dosimeter.

In the event of an overdose, the employer shall follow the instructions given by the Atomic Energy Control Commission of Canada, the ministère de la Santé et des Services sociaux or the Commission de la santé et de la sécurité du travail to ensure the safety and security of its workers.

DIVISION XVIII QUALITY OF WATER

158. Drinking water: Any establishment shall provide workers with drinking water whose quality complies with the standards of a regulation with respect to drinking water for human consumption taken under the Environment Quality Act (R.S.Q., c. Q-2).

The daily quantity of drinking water that an establishment shall put at the disposal of its workers is that which is prescribed in Schedule VIII.

159. Authorisation: A person intending to establish, reconstruct, enlarge or alter a water supply intake designed to supply an establishment with drinking water shall submit the plans and specifications thereof to the Deputy Minister of Environment and obtain his authorisation in accordance with section 32 of the Environment Quality Act.

The authorisation provided for in the first paragraph is not required where the establishment receives its water supply from a municipal waterworks system or from a waterworks system operated by a holder of the permit prescribed in section 32.1 of the Act.

160. Analysis: In any establishment that is not supplied with water by a municipal waterworks system or a waterworks system operated by a holder of the permit prescribed in section 32.1 of the Act, once a month the results of a bacteriological analysis of a sample of the water provided to the workers for consumption purposes shall be sent to the Minister of Environment.

This section does not apply to bottled water.

161. Bottled water: Any bottled water distributed in an establishment shall comply with the stipulations of the Regulation respecting bottled water (R.R.Q., 1981, c. Q-2, r.5).

162. Distributors: All establishments shall be equipped with drinking water distributors intended for consumption by the workers in a proportion of one distributor per group of 75 workers and an additional distributor for any fraction of this number above 75 workers. In an establishment with less than 75 workers, at least one drinking water distributor shall be provided.

Drinking water distributors shall be easy to clean and made of leakproof material. They shall be kept free from any source of water contamination.

163. Water unsafe for drinking: Any drinking water distribution system intended for workers' consump-

tion shall be designed and installed to eliminate any possibility of cross-connection or contamination with any piping system likely to contain water that is unsafe for drinking.

Any tap for water that is unsafe for drinking shall be identified.

164. Drinking containers: Except where workers are provided with water fountains, they shall have at their disposal sanitary individual disposable drinking containers.

The use of a common glass or cup is prohibited.

When workers are provided with drinking containers, a garbage container shall be placed less than 2 metres from the drinking water distributor

DIVISION XIX COMMON FACILITIES

165. Lunch room: A lunch room shall be provided in the establishment for workers who eat their meals at work.

The lunch room shall:

(a) occupy a minimum area of one square metre per worker for all workers likely to eat there at the same time;

(b) be provided with tables and seats for all workers likely to eat there at the same time;

(c) be separate from the work premises;

(d) be cleaned after each meal period;

(e) be equipped with covered garbage containers that shall be leakproof, rust resistant, and cleaned daily during working days;

(f) be provided with hooks for hanging clothes, except where cloakrooms or hooks already exist in an area adjacent to the lunch room;

(g) not be used for storage purposes.

This section does not apply to facilities used for office space purposes.

166. Changing rooms: For an establishment or part of an establishment provided for in sections 44, 72 or in paragraph 3 of section 134 where the workers wear clothes used exclusively for work, the workers shall be

provided with a place separate from the workplace and equipped with hooks or lockers for placing such clothes.

This room shall be equipped with a minimum level of illumination of 250 lux and kept at a minimum temperature of 20 °C.

167. Changing room with drying facilities: For work performed in compressed air, the workers shall be provided with a changing room with drying facilities.

The changing room with drying facilities shall consist of a room with:

(a) a space where the workers may change their clothes;

(b) benches and lockers or hooks;

(c) a clearance of at least 600 millimetres in front of each row of lockers;

(d) facilities with sources of heat for drying workers' clothes;

(e) showers with hot and cold water installed in an adjacent room, in the proportion of one shower per 15 workers who finish their shift at the same time.

This section applies to underground work sites.

168. Maintenance: Changing rooms and other common facilities put at workers' disposal shall be maintained in sanitary conditions.

169. Heated shelter: Where a sanitary landfill is operated more than 16 hours per week, a heated shelter equipped with drinking water, a telephone or a radio transceiver, lighting and a toilet facility shall be installed.

170. Camp: Except for periods of short duration, a camp and eating facilities shall be provided to workers who perform work in remote areas offering no service for lodging them.

171. Transportation facilities: Where a camp is not provided in accordance with section 170, the employer shall provide workers with transportation facilities in accordance with Division XXXII.

172. Camp facilities. For the purposes of section 170 and 171, "camp" means an aggregate of temporary or permanent facilities, as well as their outbuildings, that the employer organises to lodge workers, whether it involves permanent camps, permanent summer camps

or temporary camps as defined under the Regulation respecting sanitary conditions in industrial or other camps (R.R.Q., 1981, c. Q-2, r.3).

DIVISION XX SANITARY FACILITIES

173. Sanitary facilities: All establishments shall have installed one or more toilet facilities that are separate from the other rooms in the establishment.

The quantity of water closets, urinals, lavatories, and showers shall comply in number with the standards provided under Schedule C of the Plumbing Code (R.R.Q., 1981, c. I-12.1, r.1) as it appears under Schedule IX of this regulation.

174. Construction sites: Any construction site shall be equipped with at least one toilet per group of 30 workers or less, up to a maximum of 7 toilets.

Such toilets shall be:

(a) within walking distance of the construction site;

(b) built so that the occupant cannot be seen and is sheltered from the weather and falling objects;

(c) heated to a minimum temperature of 18 °C;

(d) provided with natural or artificial lighting;

(e) ventilated by natural or mechanical means;

(f) provided with a seat and cover.

175. Sinks: In any establishment, a sink for individual use may be replaced by a sink for common use having a length of 600 millimetres.

176. Items for ensuring hygiene. In washrooms, the following items shall be at the workers' disposal:

(a) soap or another cleaning product;

(b) paper towels, hand dryers or roller towels;

(c) where paper towels are used, waste paper baskets.

177. Accessories, operation and maintenance: The toilets of any establishment shall be:

(a) provided with toilet paper;

(b) kept in proper working order;

(c) provided with seats.

Any cracked or damaged toilet seat shall be replaced immediately.

178. Facilities and upkeep: The toilets of any establishment shall be:

(a) used exclusively for the purposes for which they were designed;

(b) free from any obstacle or obstruction that could prevent them from being used;

(c) kept clean and free of vermin, rodents or insects;

(d) be cleaned and washed before each shift.

DIVISION XXI ERGONOMY

179. Manual handling and moving: An employer shall not require a worker to handle loads in such a manner as to endanger his safety.

Workers assigned to the handling of loads shall be instructed in the proper manner of lifting and moving them.

Mechanical apparatus shall be provided and used for carrying loads, when the safety of the worker is jeopardized.

180. Working on piles: A worker shall have the necessary equipment allowing him to reach the top of piles of material safely, such as step ladders, ladders, pinch grips or any other equipment designed for such purpose.

181. Working areas: The height of workbenches, desks and counters, and the position of chairs shall be adapted to the work and the worker in such manner as to ensure for them a correct posture and to reduce their fatigue.

182. Efficient location: Tools, handles and materials shall be located in positions that facilitate work and reduce strain

183. Chairs and benches: workers shall have chairs or benches put at their disposal when the nature of their work so permits.

184. Pauses for meals: When a task lasts for over 5 hours, a 30 minute pause shall be granted within a 3 hour period in the middle of the work period to allow workers to eat a meal.

DIVISION XXII MACHINES

§1. Protectors and protective devices

185. Applicable provisions: This subsection applies, with necessary adaptations, to all types of machines, except insofar as it is amended by other subsections.

Grinders are, however, governed under sections 205 to 209 only.

186. Controlling the danger zone: Subject to section 187, a machine shall be designed and built as to make its danger zone inaccessible, in the absence of which it shall be equipped with at least one of the following protectors or protective devices:

(a) in the case where it is foreseeable that no one will have access to the machine's danger zone while it is in operation:

1) a permanent protector that prevents any unexpected access to the danger zone;

2) a protector fitted with an interlocking device;

3) an interlocked protector fitted with an interlocking device;

4) a captor device designed to stop all dangerous operations in the case of an unexpected access to the danger zone.

(b) in the case where it is foreseeable that at least one person will have access to the machine's danger zone while it is in operation:

1) a protector fitted with an interlocking device;

2) an interlocked protector fitted with an interlocking device;

3) an automatic closing protector;

4) an adjustable protector;

5) a captor device designed to stop all dangerous operations in the case of an unexpected access to the danger zone;

6) a two-hand operations control.

In this section as under section 243, "protector" means the part of a machine used specifically to isolate a danger zone by means of a material barrier, such as a housing, cover, screen, door or cabinet.

187. Equivalent safety precautions: Section 186 does not apply when it is foreseeable that the effects of installing a protector or a protective device on a machine will make the operations for which it was designed reasonably impractical.

In this case, the employer shall take precautions that ensure equivalent safety of workers, namely regarding the organisation of the work, workers' training, operating conditions and the machine's operating modes, and the individual protective means and equipment that take into account the absence of a protector or a protective device.

188. Installation: Subject to section 189, before operating a machine, the protectors shall be installed or the protective devices shall be operational.

189. Adjustment, maintenance and apprenticeship: When a worker shall access a machine's danger zone for adjustment, maintenance or apprenticeship purposes and to do so, he shall move or remove a protector, or neutralise a protective device, the machine shall only be restarted by means of a manual control or in compliance with a safety procedure specifically provided for allowing such access. This manual control or this procedure shall have the following features:

(a) it causes any other control mode or any other procedure, as the case may be, to become inoperative;

(b) it only allows the operating of the dangerous parts of the machine by a control device requiring continuous action or a two-hand control device;

(c) it only allows the operating of these dangerous parts in enhanced security conditions, for instance, at low speed, under reduced tension, step-by-step or by separate steps.

190. Protector features: A protector or a protective feature shall not:

(a) cause additional risks for workers;

(b) be in itself a source of danger, for instance, because of the presence of cutting edges, irregularities or burrs.

191. Permanent protector: A permanent protector is one that can only be removed with the assistance of a tool or is set in place permanently, for instance, by being welded.

192. Interlocking protector: A protector equipped with an interlocking device shall have the following features:

(a) it causes the stoppage of the machine or the operations of its dangerous parts when it is moved;

(b) it makes it impossible to start the machine or the operating of its dangerous parts for as long as it is being moved;

(c) it does not cause the starting of the machine or its dangerous parts once it is restored to its place and reactivated.

193. Interlocked protector: An interlocked protector equipped with an interlocking device shall have the following features:

(a) it remains in place and is interlocked as long as the machine or its dangerous part are in operation;

(b) it makes it impossible to start the machine or the operating of its dangerous parts for as long as it has not been restored to its place and reactivated;

(c) it does not cause the machine or its dangerous parts to be restarted once it is restored to its place and reactivated.

194. Two-hand control: Any two-hand control shall have the following features:

(a) it operates in such a manner that the worker shall use both his hands to start the machine;

(b) it is designed and located to prevent involuntary or accidental operations;

(c) it is kept at a safe distance from the dangerous zone.

195. Multiple two-hand control: If one of the machine's functions is started by more than one two-hand control, these controls shall be designed in such a manner that none of them can start the machine unless all the other controls are also activated and held in this same position.

196. Spare part: When a protector or a protecting device is replaced, the spare protector or protecting device shall offer safety features equal to those of the original part.

§2. Starting and stopping devices

197. Individual device: Each machine shall be able to be started and stopped individually.

198. Warning device: When the starting up of a machine constitutes a danger for anyone near the ma-

chine, a warning device or any other effective means of communication shall announce the starting up of the machine.

199. Safety control devices: Control devices or switches shall be designed, installed and maintained so as to avoid the accidental starting up or stopping of a machine.

200. Emergency stop: A machine whose operating requires the presence of a worker shall be equipped with an emergency stop device located within the worker's reach.

The resetting of the emergency stop device after it is used, shall not by itself cause the starting up of the machine.

Nonetheless, such a mechanism is not required if, considering the nature of the machine, it does not help reduce the risk that the machine presents for the health, safety or physical well-being of the worker, either because it does not make it possible to reduce the machine's stopping time, or because it does not make it possible to take specific precautions for controlling this risk.

§3. Pulleys and belts

201. Prohibited use: No cracked pulleys or broken rim pulleys shall be used.

202. Safety precaution: The installing of belts or cables shall not be done while the pulleys are in motion.

203. Clutch mechanisms: When a machine is engaged by means other than loose pulleys, belt supporters composed of hooks, rollers or other devices shall be installed to prevent the belts from floating on the shafting.

§4. Grinding machines and abrasive materials

204. Grinding machines: Grinding machines, with the exception of grinders, which are equipped with a 50 millimetre diameter grindstone or more, shall be provided with a guard compatible with the task being performed and shall offer the most efficient protection against accidents.

205. Grinder: A grinder shall be equipped with the following safety devices:

- (a) a grinding wheel housing;
- (b) an adjustable spark-shield;

- (c) an adjustable workpiece chuck;

- (d) a transparent screen.

206. Housing: The grinding wheel housing shall be built to withstand impacts and the projection of fragments if the wheel bursts.

207. Spark shield: The spark shield is designed to prevent sparks and grinding wheel fragments from being projected outside the housing.

The gap between the spark shield and the grinding wheel shall be adjusted as the wheel wears down and this gap shall not exceed 5 millimetres with a 1 millimetre margin of error.

208. Gap adjustment: The gap between a workpiece holder and the grinding wheel shall be adjusted as the grinding wheel wears down such that the gap does not exceed 3 millimetres.

209. Transparent screen: The purpose of the transparent screen is to prevent particles from being projected into the operator's face and eyes.

The screen shall be made of a shock-resistant transparent material.

210. Mounting a flat grinding wheel: A flat grinding wheel that is non-permanently mounted on its spindle shall be mounted between two plates whose diameter is at least 1/3 the nominal diameter of the grinding wheel by inserting a buffer of blotter paper between the wheel and the plates.

211. Storage of grinding wheels: Grinding wheels shall be stored:

- (a) in compliance with the manufacturer's recommendations;

- (b) away from impacts, in chests or drawers specially designed for such purpose;

- (c) in dry storage areas, away from sudden temperature changes;

212. Precautions: Before installing or using a grinding wheel, the following precautions shall be taken:

- (a) the grinding wheel shall not be cracked, split, chipped or unbalanced;

- (b) at no time during its use shall the manufacturer's rated rotational speed be exceeded.

§5. *Machines for working wood and saws*

213. Bandsaw: Bandsaw wheels shall be housed in a casing.

Furthermore, the saw shall be equipped with a protector that prevents access to the band over its entire length, except on the side where sawing is carried out between the blade shield and the bench.

214. Circular saw: Circular saws shall be provided with protective hoods.

215. Prohibition: The use of a saw blade that is not in good condition is prohibited.

216. Safety precaution: All circular saw blades shall be used for the purposes for which they were designed.

Furthermore, the saw shall not be operated faster than the maximum speed rated by the blade manufacturer, nor shall the blade exceed the maximum diameter specified by the machine manufacturer.

217. Guide blocks and gages: Guide blocks and gages for pit saws and crosscut saws shall be available and in good conditions.

218. Knife-type splitter: Hand-fed pit saws and crosscut saws shall be equipped with a knife-type splitter, which shall be chosen and installed according to standard practices.

219. Accessories: On wood working machines, accessories such as push sticks, jigs or mounting devices intended to keep workers' hands away from the danger zones shall be used whenever the work so permits.

220. Recoiling parts: Wood working machines likely to cause the projection of parts, such as circular resaws and planing machines, shall be equipped with a device to prevent the recoil of parts.

§6. *Full-cycle punch presses*

221. Power cut-off mechanism: A full-cycle or complete-revolution punch press must be equipped with a power cut-off mechanism, such as a switch or a circuit breaker.

The purpose of this power cut-off mechanism is to cut all power to the punch press, including that of the auxiliary circuits. It must be possible to lock off this mechanism in the off position.

222. Starter: The starter of the punch press motor must be protected against inadvertent or accidental starts.

In the event of a power failure, the starter must return to the off position.

223. Auxiliary circuits: The auxiliary circuits of the punch press, such as those linked to two-hand control units and solenoid valves, must only be powered by a transformer, the secondary of which is insulated, namely grounded.

This transformer's rated output voltage must not exceed 120 volts.

224. Protection of the pedal mechanism: The pedal of the punch press and its components must be protected both on top and on the sides by a stationary guard to shield it from inadvertent or accidental gestures.

When the punch press is in operation, this pedal must only be accessible to the operator.

225. Single action mechanism: The punch press must be equipped with a single action mechanism which disconnects the controls of the trigger mechanism, including those of the pedal, at the end of each cycle.

226. Rod or guide for springs: The springs of the single action mechanism, those of the mechanism that controls the clutch and those of the rod linkage assembly must be of the compression type, mounted on a rod or placed in a guide, to prevent the windings from becoming entangled in the event of breakage. The space between the windings must be less than the diameter of the wire.

227. Purge valve: The pneumatic components of a full-cycle punch press must be equipped with an automatic purge valve which will close off the air supply and automatically purge the circuit.

A pressure gauge must be installed on the punch press in full view of the worker to indicate that the line has been purged.

228. Pressure detector: When a pneumatic system is used to control the punch press clutch, a pressure detector must be installed to prevent the operation of the clutch control when the pressure falls below the minimum operating pressure.

229. Anti-repetition device: When the punch press has a two-hand control unit, it must be equipped with an anti-repetition device.

Such a punch press must also be equipped in such a way as to prevent the simultaneous use of other types of controls to operate the machine.

230. Prevention of early triggering: The punch press control unit components, such as the pedal or control lever, must have a device that prevents early triggering.

DIVISION XXIII TOOLS

231. Safe usage: Tools shall be suitable for the work for which they are intended and used only for the purposes for which they were designed

232. Inspection and maintenance: Tools shall be inspected regularly and replaced or repaired if they are found defective.

233. Storage of hand tools: Hand tools shall not

(a) be left on the floors, passages, stairs or other areas where people work or circulate;

(b) be left in elevated locations from where they could fall on people.

234. Handles: Handles for tools such as: axes, hammers, sledge-hammers, shall be carefully adjusted at the heads, firmly fixed and replaced if found defective.

235. Files: Files shall have metal ferruled handles or other sturdy handles and shall not be used without them.

236. Extensions: It is prohibited to adapt an extension to a tool used for tightening or loosening nuts, screws, bolts or pipes unless the tool was designed to be fitted with such an extension.

237. Burrs: The head of a steel tool used with a hammer or a sledge-hammer, such as a punch, stone chisel or other similar tool, must be kept free of burrs.

238. Cutting tool: The cutting edge of a tool, such as a hatchet or saw must be protected by a sheath when being transported in an automobile or a self-propelled vehicle.

239. Ground: A portable electrical tool shall use an extension with a third conductor for grounding which is connected to the tool's exterior metal casing, unless the tool is battery powered or equipped with double-layered insulation.

240. Position of trigger: The trigger on a portable electrical tool shall be so positioned as to eliminate any risk of an accidental start-up.

241. Controlling the supply inlet valve: The switch for an air-driven portable tool shall, in addition, be designed to automatically close the compressed air supply inlet valve when the operator releases the trigger.

242. Electrical wire and flexible hose: The electrical wire feeding an electric-powered motor as well as the flexible hose providing an air-driven motor with compressed air shall, if they hamper circulation:

(a) when left on the ground, be protected so as not to be damaged and secured so as to eliminate any risk of falling;

(b) when suspended, be at a sufficient height to ensure clearance, but at 2 meters at the least.

243. Protectors and protective devices: Protectors or protective devices for portable power tools shall be left on site when such tools are being used.

244. Safety precautions: For any carrying of a portable power driven tool from one working area to another, the following precautions shall be taken:

(a) cut off the power supply;

(b) wait for a complete stop of the tool.

245. Portable slasher: Portable slashers and chain saws shall comply with the CAN3-Z62.1-M85 Slasher standard.

246. Conditions for using a portable slasher: A portable slasher or chain saw shall only be used under the following conditions:

(a) it shall only be started at a distance of over 3 metres from the place where the gasoline tank was fuelled;

(b) it shall only be started if it is firmly set on the ground or if the worker holds it by gripping the main handle near the chain stopper while securing the rear handle between his knees;

(c) it shall be used by holding it with both hands and with both feet firmly standing on a stable surface;

(d) it shall not be used inside a building if it has an internal combustion engine, unless adequate ventilation is provided;

(e) it shall only be transported from one work station to another when the chain is immobilised;

(f) it shall only be adjusted or maintained when the motor is turned off;

(g) it shall never be fuelled when there is any danger of fire or explosion.

DIVISION XXIV **HANDLING AND TRANSPORTING MATERIAL**

§1. Manual lifting and transporting

247. Inclined plane: Where a worker uses an inclined plane for raising or lowering heavy objects, the following steps shall be followed:

- (a) avoid standing on the lower end of the plane; and
- (b) control the displacement of such objects by means of cables, blocks, wedges or other apparatus.

248. Rollers: Where rollers are used for moving objects, tools designed for this type of work such as bars or sledge-hammers shall be used; it is prohibited to use one's hands or feet to change the position of moving rollers.

249. Individual protective equipment: The wearing of individual protective equipment in accordance with division XXXI shall be used by any worker for the manual transport of objects having sharp and dangerous edges, and for the handling of burning, caustic, or corrosive substances or heated liquids.

§2. Hoisting devices

250. Conditions of use: Every hoisting device shall be used, maintained and repaired in such a manner that its use does not compromise the health, safety or physical well-being of workers. Consequently, such a device shall:

- (a) be inspected by the employer before it is used for the first time;
- (b) have its motor turned off when it is time to add gas;
- (c) not be used if strong winds, storms or extreme temperatures make it dangerous to use;
- (d) not be used when repair or maintenance work is being carried out;
- (e) be inspected and maintained in accordance with the manufacturer's instructions or standards offering equivalent safety;
- (f) when one of its parts is repaired, reconditioned or replaced, offer with respect to this part a level of safety that is equivalent to that of the original part;

(g) not be modified to increase its rated load or to be used for any other purpose without a signed and sealed certificate from an engineer or a written certificate from the manufacturer, indicating that the modification is safe.

251. Safe access: When a motorised hoisting device has an operator's station or a control station, the latter shall be safely accessible by means of a ladder, steps, grip handles or any other means.

252. Precautions: A hoisting device shall not:

- (a) be loaded beyond its rated load;
- (b) be submitted to sudden movements.

253. Rated load: The rated load shall be indicated on all hoisting devices, at a place where it is easy to read.

254. Load-rating table: A table shall indicate the rated loads of a crane or of a similar device. This table shall:

- (a) be so placed as to be easily read by the operator;
- (b) provide information which complies with that provided by the manufacturer;
- (c) furnish all the necessary information for the safe operation of the crane.

255. Boom: The boom of a hoisting device having a rated load in excess of 900 kilograms and that is not referred to in the CSA Z150-1974 Safety Code for Mobile Cranes standard and its supplement n° 1-1977, shall be built and installed according to plans and specifications approved by an engineer.

256. Mobile crane: A mobile crane shall meet the requirements of the CSA Z150-1974 Safety Code for Mobile Cranes standard and its supplement n° 1-1977, or any other standard offering equivalent safety.

257. Transformed mobile crane: A mobile crane with a luffing boom transformed and used for purposes other than the hoisting of loads, such as a scoop, a dragging bucket, a clamshell bucket or a pile hammer shall be equipped:

- (a) with bumpers or boom stops;
- (b) a high boom angle switch.

258. Signalman: If the operator of a hoisting device does not have an unrestricted view during any manoeuvre, one or more signalmen shall assist the operator:

(a) by observing the displacement of the apparatus or the load when it is out of sight of the operator;

(b) by communicating with the operator by a well-established, uniform signal code or by means of a telecommunication system, when conditions so require or when the operator judges it necessary.

259. Travelling crane: A general purpose overhead travelling crane, with the exception of a single-girder overhead crane, shall conform to the CSA B167-1964 General Purpose Electric Overhead Travelling Cranes standard.

260. Safe handling of loads: The handling of loads on a work site shall take place in accordance with the following standards:

(a) before hoisting a load, the operator or the signalman shall ensure that all the cables, chains, slings or other moorings are properly attached to the load and that hoisting does not present any hazard;

(b) the hoisting of loads shall be done vertically;

(c) when oblique hoisting is absolutely necessary, precautions dictated by the circumstances shall be taken, and this operation shall be performed in the presence of a qualified person representing the employer;

(d) if the safety of any person is threatened by the uncontrolled movement or the swinging of a raised load, one or more guide ropes shall be used;

(e) the crane operator shall avoid carrying loads above persons and shall not leave the apparatus without supervision when a load is suspended;

(f) the crane operator shall not allow a person to stand on a load, a hook or a sling suspended to a hoisting device;

(g) the hooks used to hoist loads as well as those attached to slings shall be equipped with a safety catch except where these hooks are specifically designed for the safe hoisting of certain loads.

261. Lift truck: A lift truck built after (*insert the date of the entry into force of this regulation*) shall conform to the ASME B56.1-1993 Safety Standard for Low Lift and High Lift Trucks.

A lift truck built before (*insert the date of the entry into force of this regulation*) shall conform to the CSA B335.1-1977 Low Lift and High Lift Trucks standard or the ANSI B56.1-1975 Low Lift and High Lift Trucks standard.

262. Lifting jacks: Lifting jacks that are used to lift loads shall:

(a) rest on solid bases;

(b) be lined up with the load to lift;

(c) be equipped with a positive stop to prevent overstop or a stop indicator in order to determine the limit of travel.

263. Hoisting devices that can be dismantled: Hoisting devices that can be dismantled shall be assembled, maintained and dismantled in accordance with the manufacturer's instructions or trade practice.

264. Brakes and warning device: A hoisting device shall be equipped with:

(a) hoisting brakes so designed and installed as to stop a load of at least one and half times that of the rated load;

(b) a warning device when the hoisting device is motorised.

The warning device shall be used each time that a load is moved over a work station or a traffic area.

265. Prohibited practice: Subject to section 266, no operator shall lift a worker using a hoisting device, unless the latter was designed for that purpose by the manufacturer.

266. Lifting of a worker: The lifting of a worker using a lift truck or a mobile crane is permitted if the conditions set out in section 3.10.7 of the Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6) as it reads at the time that it applies, are respected.

267. Aerial basket: An aerial basket installed on a vehicle and built after (*insert the date of the entry into force of this regulation*), shall conform to the CAN/CSA C225-M-88 Vehicle-Mounted Aerial Devices standard.

An aerial basket built before (*insert the date of the entry into force of this regulation*) shall conform to the CSA C225-1976 Vehicle-Mounted Aerial Devices standard.

However, the first and second paragraphs do not apply to the aerial basket of a fire-fighting vehicle or to a vehicle carrying such a device.

Every vehicle with an aerial basket, when it is immobilised, shall provide stable and structurally adequate support.

268. Protection against falls: Every worker in an aerial basket shall wear a safety belt equipped with a life line, attached to an anchorage point independent of the basket and offering a resistance to breakage of at least 18 kilonewtons per worker who is anchored thereto.

§3. Conveyors

269. Design: The carrying elements of conveyors shall be so designed as to support safely the loads for which they are intended.

270. Transmission devices: Belts, chains, gears, driving-shafts, drums, sheaves, chain pinions of conveyor installations shall be guarded, if these parts are located at 2,1 metres or less above the floor or the working platform.

271. Protection from falling objects: Conveyors shall preferably not be installed above passages and work stations, otherwise they shall be provided with guard-rails to prevent the falling of objects.

272. Conveyors located in elevated places: A conveyor installed more than 2 metres above the floor or ground level shall have a footbridge with a railing if workers are required to circulate on it.

A worker who must access a conveyor without having to circulate on it, shall do so with appropriate equipment and if there is a risk of falling over 3 meters, he shall wear a safety belt that complies with the belt described in section 352.

273. Safety precaution: When a conveyor is in operation, it is prohibited to climb onto the moving part or to stand on the conveyor frame for loading or unloading.

This section does not apply to conveyors designed specifically for moving people and used for such purpose, nor to slow-moving assembly lines.

274. Emergency stop: In addition to compliance with the first paragraph of section 200 whereby the emergency stop mechanism shall be within reach of the worker, emergency stop mechanisms on conveyors to which workers have access shall be located at loading and unloading stations as well as at other points along the conveyor's course.

Once the emergency stop mechanism is activated, the conveyor shall not be restarted automatically.

275. Bucket conveyors: A bucket conveyor shall be:

(a) covered on all sides and from top to bottom;

(b) equipped with doors or removable panels to facilitate inspection, cleaning and repairs. These panels shall be equipped with an interlocking device.

§4. Self-propelled vehicles

276. Conditions of use and maintenance: Every self-propelled vehicle shall be used, made and repaired in such way that it does not compromise the health, safety and well-being of workers. Consequently:

(a) the vehicle motor shall be in the off position during fuelling, except if a safe work method has been established;

(b) the vehicle shall not be used if repair or maintenance work is being carried out;

(c) the vehicle shall be maintained and inspected in accordance with the manufacturer's instructions or standards offering equivalent security;

(d) when one of its parts is repaired, reconditioned or replaced, offer with respect to this part a level of safety that is equivalent to that of the original part.

277. Safe access: The control or operating station of a self-propelled vehicle shall be safely accessible by means of a step, grip handles or a ladder.

278. Brakes and warning device: Every self-propelled vehicle shall:

(a) be equipped with efficient brakes;

(b) be equipped with a warning device.

The warning device shall be used in the yards and in buildings when there are persons nearby and in areas presenting a risk, such as doors and around bends.

Subparagraph *b* of the first paragraph does not apply to tracked bulldozers and hauling machines.

279. Design and safe layout: A self-propelled vehicle shall be designed, built and laid out so as to ensure that the driver is not struck or does not get caught by a vehicle part in movement, and is not otherwise injured by operating the vehicle on entering or leaving the cabin.

280. Protection of the driver: When there is a risk of falling objects or collision with an object being handled, the self-propelled vehicle shall be equipped with a roof, a protective screen, a cabin or a structure to protect the driver.

281. Protective structure of self-propelled vehicles: The following self-propelled vehicles manufactured after (*insert here the date on which this regulation comes into force*), shall be provided before (*insert here the date of the 180th day following the coming into force of this regulation*) with a roll-over protective structure which meets the CSA B352-M1980 Roll-over Protective Structures standard for farm, construction, landscaping, forestry, industrial and mining vehicles.

(a) industrial tractors, motor graders, prime movers, tracked hauling machines, crawler tractors, tracked loaders, wheeled tractors and wheeled loaders, whose mass is greater than 700 kilograms;

(b) compacting machines and rollers whose mass is greater than 2,700 kilograms, except machines designed for compacting asphalt;

(c) wheeled agricultural tractors of more than 15 kilowatts.

This section does not apply to graders or loaders used for snow removal on flat surfaces where the risk of overturning is non-existent.

282. Protective structures of existing self-propelled vehicles: The following self-propelled vehicles manufactured before (*insert here the date on which this regulation comes into force*), shall be provided with a roll-over protective structure which meets a standard from The Society of Automotive Engineers (SAE) standardisation organisation or a standard providing equivalent safety:

(a) power rams, and tracked or wheeled loaders and hauling machines;

(b) graders;

(c) tractor scrapers;

(d) agricultural and industrial tractors of more than 15 kilowatts.

The design, manufacture or installation of a protective structure is deemed to be in compliance with the standard if it has been certified, signed and sealed by an engineer.

This section does not apply to graders or loaders used for snow removal on flat surfaces where the risk of overturning is non-existent.

283. Identification plate: A plate shall be attached to the protective structure in the event of an overturn. This plate shall indicate:

(a) the name of the manufacturer;

(b) the protective structure's serial number;

(c) the standard with which it complies;

(d) the make and model of equipment for which it was designed.

The plate shall be permanently attached and the inscriptions thereupon shall be legible at all times.

284. Safety belt: The wearing of a safety belt is mandatory for the driver of a self-propelled vehicle equipped with a roll-over protective structure as well as for any worker in the vehicle while it is in motion.

Nonetheless, the driver of a grader or a hauling machine is not required to wear a safety belt if the vehicle has an enclosed cabin.

285. Protective shield: Self-propelled vehicles equipped with a winch for towing materials, shall have a protective shield between the winch and the driver if there be a risk of injuring the driver should the cable snap.

286. Seat and belt: Any persons other than the driver are prohibited from being on a self-propelled vehicle, if it is not equipped with a seat and a belt to accommodate each person.

287. Signal operator: When a self-propelled vehicle moves in reverse, a signal operator shall direct the driver if the movement may endanger the safety of a worker or the driver.

288. Signal operator's duties: Where the driver of a self-propelled vehicle does not have a clear field of vision when manoeuvring, he shall be directed by a signal operator who shall:

(a) continuously observe the movement of the vehicle;

(b) remain in communication with the driver via a well-established and standard set of signal codes or by a telecommunications system when conditions so require, or when the driver so deems necessary.

289. Prohibition: The driver of a self-propelled vehicle referred to under section 281 or 282 shall not leave his vehicle unattended when the mobile part of the device for lifting, towing or pushing a load is in a raised position.

§5. All terrain vehicles

290. Operating conditions: The operating of an all terrain vehicle is only permitted under the following conditions:

- (a) the vehicle is mounted on at least four wheels;
- (b) it is equipped with a properly fire rated portable extinguisher, if the task involves any risk of fire;
- (c) it is equipped with a yellow warning flag measuring at least 0.05 square metre and placed at least 1.5 metres above ground level, if the vehicle is used in yards;
- (d) the workers have been training and warned of the specific dangers related to the use of this type of vehicle;
- (e) the driver shall wear the following individual protective equipment:
 - 1) a protective helmet of the type for motorcyclists or snowmobile users in compliance with the Regulation respecting protective helmets for motorcyclists and snowmobile users (R.R.Q., 1981, c. C-24, r.7) as it reads at the time that it applies;
 - 2) protective goggles or a visor designed to be attached to a protective helmet;
 - 3) flexible gloves that provide a firm grip on the vehicle's handles, levers and steering.

291. Prohibition: An all terrain vehicle shall not be used for towing with a chain or cable unless such chain or cable be made of Kevlar, Spectra or some other material having the same properties.

DIVISION XXV
PILING OF MATERIALS

292. Piles of material: Piling of materials shall be so performed that the piles do not obstruct:

- (a) the proper distribution of natural or artificial lighting;
- (b) the proper operation of machines or other installations;

- (c) traffic in passages, aisles, stairs, elevators, near doors;

- (d) access to electric panels;

- (e) access to showers and other emergency equipment;

- (f) the efficient operation of automatic sprinklers or access to the fire fighting equipment.

The distance between the pile and the sprinkler shall not be less than 450 millimetres.

293. Resistance of walls and bulkheads: No material shall be piled against building walls or bulkheads without there being a previous determination that such walls or bulkheads can stand the lateral pressure.

294. Stability of piles: Material shall not be piled to a height that may compromise the stability of the pile.

DIVISION XXVI
HANDLING AND USING EXPLOSIVES

295. Scope: This section applies to all blasting work or all work requiring the use of explosives. However, it does not apply to such work when carried out in a mine.

296. Shot-firer: Every person who carries out blasting operations or any work requiring the use of explosives shall hold a valid shot-firer's certificate issued by the Commission de la santé et de la sécurité du travail or by an agency recognised by the latter.

297. Assistants: A shot-firer may not be assisted by more than 2 assistants who do not hold a shot-firer's certificate referred to in section 296.

Assistants can help the shot-firer in his work, with the exception of setting off the blast which shall be done by the shot-firer himself.

The shot-firer shall supervise and co-ordinate the work of his assistants.

298. Minimum age: Every worker must be at least 18 years old to perform blasting work or any work requiring the use of explosives.

299. Handling and use of explosives: All blasting work or all work requiring the use of explosives shall be carried out in conformity with section IV of the Safety Code for the construction industry, with the exception of subsection 4.2, as this section reads at the time that it applies.

300. Cancellation or suspension: The Commission de la santé et de la sécurité du travail shall cancel the certificate of a shot-firer who is found guilty of an offence under section 236 or 237 of the Occupational Health and Safety Act.

The Commission can also cancel or suspend, for a period of from 3 to 24 months, the certificate of a shot-firer when the work he does is the subject of a remedial order under section 182 of the Occupational Health and Safety Act or of an order under section 186 of that Act, by reason that he refused to comply with the Act or this regulation.

DIVISION XXVII

WORKING IN AN ENCLOSED SPACE

301. Definitions: For the purposes of this section, the following definitions shall apply:

(a) “qualified person”: a person who, by reason of his knowledge, his training or his experience, is able to identify, assess and control the dangers relating to an enclosed space;

(b) “hot work”: any work that requires the use of a flame or that can produce an ignition source.

302. Qualified workers: Only those persons who have the knowledge, training or experience required to do work in an enclosed space are qualified to perform work there.

303. Entry prohibited: Entry to an enclosed space is prohibited for any person who is not assigned to do work, to perform a task or to carry out a rescue there.

304. Gathering of information: Before any work or task is carried out in an enclosed space, the following information shall be available, in writing, on the work premises:

(a) information on the specific dangers associated with the enclosed space and that concern:

1) the prevailing internal atmosphere, namely the concentration of oxygen, inflammable gases and vapours, combustible or explosive dusts as well as the categories of contaminants likely to be present in this enclosed space or nearby;

2) the fact that the natural or mechanical ventilation is insufficient;

3) the materials that are present there and that can cause the worker to sink or drown, such as sand, grain or a liquid;

4) the interior form;

5) energies such as electricity, moving mechanical parts, heat stress, noise and hydraulic energy;

6) ignition sources such as open flames, lighting, welding and cutting, static electricity or sparks;

7) any other special circumstances such as, for example, the presence of rodents or insects;

(b) the prevention measures that should be taken to protect the health and to ensure the safety and well-being of workers, and in particular those concerning:

1) safe methods and techniques for carrying out the work;

2) appropriate and necessary work equipment to perform the work;

3) the personal or collective protective means and equipment that the worker must use when performing his work;

4) the rescue procedures and equipment stipulated in section 312.

This information shall have been compiled by a qualified person.

305. Communication of information and explanations: The information referred to in section 304 shall be conveyed and explained to all workers before they enter the enclosed space by a person who is able to adequately inform them on how to perform the work safely.

306. Ventilation standards: The enclosed space shall be ventilated by natural means or by mechanical means in such a way as to ensure that the following atmospheric conditions are maintained:

(a) the oxygen concentration must be superior or equal to 19,5 % and inferior or equal to 23 %;

(b) the concentration of inflammable gases and vapours must be inferior or equal to 10 % of the lower explosive limit;

(c) the concentration of one or more contaminants referred to in subparagraph a of the first paragraph of section 304 shall not exceed the standards set out in Schedule I, for these contaminants;

(d) the concentration of combustible or explosive dusts shall be maintained and controlled at a safe level.

307. Conditions of entry: No worker can enter or be present in an enclosed space unless the internal atmosphere of the enclosed space complies with the standards set out in subsection *a* to *d* of section 306.

However, in the case where it is impossible, by ventilating the enclosed space, to maintain an internal atmosphere that complies with the standards set out in subsections *a* and *c* of section 306, a worker can only enter or be present in this enclosed space if he wears the respiratory tract protective equipment stipulated in section 49 and if the internal atmosphere of this enclosed space complies with paragraphs *b* and *d* of section 306.

Similarly, in the event where it is impossible to maintain and control in the enclosed space the concentration of combustible or explosive dusts at a safe level, a worker can only enter or be present in this enclosed space if he has received training developed by a qualified person and whose purpose is the methods and techniques that shall be used to perform the task safely and if the internal atmosphere of this enclosed space complies with paragraphs *a* to *c* of section 306.

In the event that hot work is performed in an enclosed space, a worker can only enter or be present in this enclosed space if, in addition to the conditions prescribed under this section, continuous readings of the concentration of the inflammable gases and vapours found there are taken by means of a direct reading instrument equipped with an alarm.

308. Special measures: Unless special safety measures are taken by the employer, no worker can enter or be present in an enclosed space when a qualified person detects the presence of a contaminant, other than those referred to in section 304 and the concentration of which requires that special measures be taken.

These measures include training devised by a qualified person and dealing with methods and techniques that must be used by the worker to carry out his work safely in this enclosed space. They can also provide, where necessary, for the use of equipment that is appropriate for this type of work as well as the other personal and collective protective means and equipment that the worker must use.

309. Method and frequency of readings: Readings of the oxygen concentration in the enclosed space as well as of inflammable gases and vapours and contaminants measurable by direct reading and likely to be present in the enclosed space or nearby shall be made:

(*a*) before workers enter the enclosed space and, subsequently, on a continuous or periodic basis, according to the evaluation of the danger made by a qualified person;

(*b*) if circumstances modify the internal atmosphere of the enclosed space and result in the evacuation of workers due to the fact that the quality of the air does not comply with the standards set out in subsections *a* to *c* of section 306;

(*c*) if the workers leave the enclosed space and the work site, even momentarily, unless a continuous monitoring of the internal atmosphere of the enclosed space is maintained.

The readings shall be taken in such a manner as to obtain an accurate equivalent to that obtained following the methods described in section 46 or, when these measures cannot be applied, by following another recognised method.

310. Register of readings: The results of the readings made under section 309 shall be recorded, on the work premises, in a register, identifying the enclosed space in question.

However, in the case where the readings are made using continuous reading instruments equipped with alarms that sound when the air quality does not meet the standards set out in subsections *a* to *c* of section 306, the readings shall only be recorded in the register if the alarm goes off.

Only the entries in the register that do not comply with the standards set out in subsections *a* to *c* of section 306 shall be kept for a period of at least 5 years.

311. Supervision: When a worker is present in an enclosed space, another person posted outside and having the skills and information to supervise the worker shall remain in visual contact, hearing contact or contact by any other means with the worker to initiate, if necessary, the rescue procedures quickly.

312. Rescue procedure: A rescue procedure making it possible to quickly lend assistance to any worker carrying out work in an enclosed space shall be established and implemented, as soon as the situation so requires.

This procedure shall provide for the necessary rescue equipment. It may also make provision for a team of rescuers, an evacuation plan, alarm and communications devices, personal protective equipment, safety belts, life lines, a first aid kit and equipment as well as recovery equipment.

313. Unobstructed access: The use of personal or collective protective means or equipment must not obstruct workers when they enter or leave an enclosed space.

314. Precautions regarding free flow materials: No person may enter an enclosed space used to store free flow materials, when filling or emptying is taking place and when precautions have not been taken to prevent an accidental resumption of filling.

315. Safety belt: When it is vital that workers enter an enclosed space where free flow materials are stored, each worker shall wear a safety belt attached to a life line, that is as short as possible and that is firmly attached outside the enclosed space.

DIVISION XXVIII WELDING AND CUTTING

316. Prohibition: Welding and cutting operations are prohibited close to combustible substances or in places containing flammable or explosives dusts, gases, or vapours, unless special precautions are taken to prevent fires or explosions.

317. Arc welding and cutting: Any task involving arc welding or cutting, as well as the installation, handling and maintenance of equipment required for doing so, shall comply with chapter 5 of the CAN/CSA W117.2-M94 Code for safety in welding, cutting and adjacent processes standard.

318. Resistance welding: Any task involving resistance welding, as well as the installation, handling and maintenance of equipment required for doing so, shall comply with chapter 6 of the CAN/CSA W117.2-M94 Code for safety in welding, cutting and adjacent processes standard.

319. Gas welding, brazing and cutting: Any task involving gas welding, brazing or cutting, as well as the installation, handling and maintenance of equipment required for doing so, shall comply with chapter 8 of the CAN/CSA W117.2-M94 Code for safety in welding, cutting and adjacent processes standard.

320. Protective screens: Permanent or movable protective screens shall be installed in places where welding or cutting operations are ordinarily performed and where people, other than welders, work or circulate.

321. Work performed on a recipient: Before performing welding, cutting or heating operations on a recipient, such as a reservoir, it shall be established that

the recipient did not previously contain materials that are combustible or likely to discharge toxic or inflammable vapours when heated.

If the recipient has already contained such materials, no work involving welding, cutting or heating may be undertaken on the recipient until it has been properly cleaned in order to eliminate any material that is combustible or likely to discharge toxic or inflammable vapours when heated.

If after having cleaned the recipient, there remains a risk of explosion, the work involving welding, cutting or heating may only be performed if one of the following conditions is met:

(a) providing the recipient if filled with water to within a few centimetres of the point of welding, cutting or heating and providing the remaining space is ventilated to ensure the evacuation of the hot air;

(b) providing the recipient has been purged of inert gases.

Conduits and connections shall be disconnected, then closed to eliminate the spilling of any material that is combustible or likely to discharge toxic or inflammable vapours when heated.

322. Antiback-up device: A torch that operates with oxygen and a combustible gas shall be equipped with an antiback-up gas valve and an antiback-up flame device at the combustible gas intake point and oxygen intake point located on the torch handle.

323. Grounding: A portable welding machine powered by an internal combustion engine shall be grounded if it is equipped with auxiliary 120V or 240V plugs and if these plugs are used at the same time as the welding.

Nonetheless, such grounding is not necessary if the tools, appliances or accessories connected to the auxiliary plugs are equipped with double insulation or a third conductor ensuring the continuity of the grounding, or if the branch circuits are protected by Class A ground fault circuit interrupters

324. Prohibited current return circuits: The use of electric conductors or conduits containing gases or inflammable liquids as a welding or cutting current return circuit is prohibited.

DIVISION XXIX**OTHER HIGH RISK TASKS****325. Work performed in an isolated environment:**

When a worker performs a task alone in an isolated environment where it is impossible for him to request assistance, an efficient means of surveillance, whether continuous or intermittent, shall be installed.

326. Tasks involving maintenance or repairs: In the case of tasks involving maintenance or repairs, the following safety measures shall be taken:

(a) isolate any danger zone surrounding a machine in operation or protect workers who are nearby;

(b) mark off the areas where such work is performed in order to protect anyone likely to be exposed to danger.

327. Work presenting a danger of falling: Tasks involving maintenance or repairs that present a danger of falling shall be performed with the assistance of scaffolding, work platforms, footbridges or any other appropriate equipment.

328. Making secure: Before undertaking any maintenance or repair work on a machine, the following safety measures shall be taken, subject to the provisions under section 189:

(a) putting the power supply switch in the off position and bringing the machine to a full stop;

(b) the securing or locking by each person involved of all the machine's sources of energy or power circuits in order to avoid any accidental starting of the machine.

329. Compressed air cleaning: It is prohibited to clean a person with compressed air.

330. Air pressure limit: The pressure of compressed air used for the cleaning of a machine or piece of equipment shall be less than 200 kilopascals, unless the cleaning is carried out in a cabin specially designed for abrasive air blasting and equipped with a vacuuming system.

331. Pipelines for compressed air: Pipelines for transporting compressed air shall be protected from all impacts and be clearly identified regarding the nature of their contents.

332. Attachments: Hoses for transporting compressed air shall be equipped with one of the following attachments, in the event of assembly by section:

(a) a collar linked to a chain on each side of the coupling and held together by an attachment;

(b) an automatic locking device;

(c) a coupling fitted with a clamping device.

333. Working in compressed air: Any work carried out in compressed air shall be done in compliance with section IX of the Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6) as it reads at the time that it applies.

334. Using a sealing pistol: Any work carried out with a sealing pistol shall be done in compliance with section VII of the Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6) as it reads at the time that it applies.

335. Work performed near an electric line: Any work carried out near an electric line shall be done in compliance with section V of the Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6) as it reads at the time that it applies.

336. Deforestation work: Deforestation work not involving the recovery of wood, which is mainly performed prior to the construction of an electric energy transport line, shall be performed in compliance with the Regulation respecting forest operations (R.R.Q., 1981, c. S-2.1, r.22) as it reads at the time that it applies.

337. Diving operations: All diving operations shall be conducted in compliance with the CAN/CSA-Z275.2-92 Occupational Safety Code for Diving Operations standard.

Any diving operation performed for scientific purposes as defined under the standard referred to in paragraph 1 shall be carried out in compliance with the Standard governing diving practices for scientific purposes of the Canadian Subaquatic Sciences Association.

All divers shall meet with the requirements of the Z275.4-97 Competency Standard for Diving Operations.

DIVISION XXX**VEHICLE MAINTENANCE**

338. Automotive lifts and elevating platforms: In buildings built on and after the date this regulation comes into force, garages performing the maintenance and repair of automobiles or self-propelled vehicles shall be equipped with automotive lifts and elevating platforms instead of ground level pits, unless such pits are necessary for technical reasons.

339. Pits: Garage pits in existence on the date that this regulation comes into force and pits that are needed for technical reasons in new garages shall meet one of the following standards:

(a) the floor of the pit shall be higher than the level of the outside ground, with an opening towards the outside at the lowest level of the pit floor, allowing for natural ventilation;

(b) in the event that the pit is arranged differently, it shall be equipped with a separate mechanical ventilation system capable of providing 12 air changes per hour. As such, the floor shall have a 1 to 120 incline and have an opening at the lowest level of the pit to allow for the evacuation of air.

340. Access to pits: Access to garage pits is restricted only to the people who work in them.

341. Safety posters: Posters requiring that vehicle motors be turned off and prohibiting smoking during fuelling shall be installed prominently in sight near gasoline pumps.

342. Tire holding cage: After the repair or mounting of a tire on removable rims, the wheel shall be put into a holding cage to be filled with air.

DIVISION XXXI

MEANS AND EQUIPMENT FOR INDIVIDUAL AND GROUP PROTECTION

343. Employer's obligations: The employer shall supply at no cost to workers the means and equipment for group or individual protection as provided under this section as well as under sections 249 and 315 and shall ensure that when workers are going about their tasks, they use such means and equipment.

The employer shall also make sure that the workers have received adequate information on the usage of such protective means and equipment.

344. Worker's obligations: The worker shall wear or use, as the case may be, the individual or group protective means and equipment specified under this section as well as under sections 249 and 315.

345. Safety precautions: in areas where there is a hazard of contact with moving parts, workers shall comply with the following standards:

(a) their clothing shall fit well and have no loose flaps;

(b) necklaces, bracelets or rings shall not be worn, with the exception of medical alert bracelets;

(c) anyone with long hair shall tuck it under a bonnet, a hat or a hairnet;

(d) the wearing of gloves is prohibited.

346. Safety hat for vertical impact: The wearing of a safety hat in compliance with the ANSI Z89.1-1986 Protective Headwear for Industrial workers standard is mandatory for any worker exposed to head injuries from vertical impacts, either by the penetration of falling objects or by an electrical shock.

347. Safety hat for vertical and lateral impacts: The wearing of a safety hat in compliance with the CAN/CSA Z94.1-92 Industrial Protective Headwear standard, is mandatory for any worker exposed to head injuries from vertical impacts caused by falling objects or by lateral impacts or electrical shock.

348. Eye and face protectors. The wearing of an eye protector or a face protector in compliance with the CAN/CSA Z94.3-92 Industrial Eye and Face Protectors standard is mandatory for any worker who is exposed to a hazard that may cause injury to his eyes or face by:

(a) particles or objects;

(b) dangerous substances or molten metals;

(c) intense radiation.

349. Protective footwear: The wearing of protective shoes in compliance with the CAN/CSA Z195-M92 Safety Footwear standard is mandatory for all workers exposed to foot injuries incurred in the following cases:

(a) by perforation;

(b) by the falling of heavy, burning or sharp objects;

(c) by contact with molten metals, or with hot or corrosive liquids;

(d) by other hazardous work.

350. Protectors for other parts of the body: The wearing of protective equipment suited to the type of work performed such as a hood, an apron, leggings, protective sleeves and gloves is mandatory for all workers exposed to burning objects or objects with sharp edges or dangerous projections, splashings of molten metals or in contact with hazardous or infectious substances.

351. Devices for protection from falls: The wearing of a safety belt is mandatory for all workers exposed to falling over 3 metres from their workstations, except if a worker is protected by some other device that ensures equivalent safety or by a safety net, or when he is only using some means for entering or exiting.

352. Safety belts: A safety belt shall:

(a) comply with the CAN/CSA Z259.10-M90 Safety Belt standard;

(b) be equipped with a shock absorber that complies with the CAN/CSA Z259.11-M92 standard on personal fall arrest systems;

(c) be equipped with a life line preventing a fall in excess of 1.2 metres and in compliance with the CAN/CSA Z259.1-95 standard covering Safety Belts and Lanyards for the construction and mining industries.

353. Anchorage point: The anchorage point for a safety belt lifeline shall be attached in one of the following ways:

(a) by anchoring it to some point with a tensile strength at break of at least 18 kilonewtons;

(b) by attaching it to a fall arrest device or a lowering device connected to a vertical lifeline and in conformity with the CAN/CSA Z259.2-M1979 standard covering shock absorbers for personal fall arrest systems and lowering devices;

(c) by attaching it to a horizontal lifeline and anchorage point system, designed by an engineer, as demonstrated by a plan or certification available on the premises where such work is performed.

354. Vertical lifeline: A lifeline shall:

(a) comply with the CAN/CSA Z259.2-M1979 standard covering shock absorbers for personal fall arrest systems and lowering devices.;

(b) be used by one person only;

(c) be less than 90 metres in length;

(d) be attached to an individual anchorage point with a tensile strength at break of at least 18 kilonewtons;

(e) be protected to prevent it from coming in contact with a sharp protuberance.

355. Two-point suspension scaffold: When a worker uses a two-point suspension scaffold with four lifting cables, the lifeline anchorage point shall be attached in one of the following ways:

(a) by attaching it to a platform anchor with a tensile strength at break of at least 18 kilonewtons;

(b) by attaching it to a wire cable of at least 8 millimetres in diameter, attached at the ends and in the centre to the platform.

356. Safety snap and safety lock: When the lifeline ends with a locking safety snap, the snap shall be equipped with an automatically locking safety lock.

357. Safety net: A safety net shall be used in the following circumstances:

(a) when the wearing of a safety belt can be harmful or be a source of danger to the worker;

(b) when the protection offered by the safety belt and jacket is not sufficient because of the nature of the work.

358. Using a safety net: A safety net shall:

(a) be capable of stopping a person before he has dropped more than 6 metres in free fall;

(b) cover a sufficiently large area to ensure effective protection;

(c) be capable of supporting a mass of 115 kilograms falling from a maximum height of 6 metres and with a safety factor of 3;

(d) be sufficiently flexible to break the fall and retain the person;

(e) be weather resistant;

(f) be free of all foreign matter;

(g) have meshes measuring about 150 millimetres by 150 millimetres.

359. Safety jacket: The wearing of a safety jacket is mandatory for all workers who work above water, if the following conditions are met:

(a) no other safety measure may provide efficient protection;

(b) the depth of the water is adequate to allow for efficient usage.

360. Safety jacket features: The safety jacket shall:

- (a) be able to keep the user's head above water;
- (b) allow a person to float without any physical effort.

361. Safety equipment: In addition to safety jackets, the following safety equipment shall be put at the disposal of workers working over water:

(a) a boat in proper condition, moored nearby the workstation and equipped with a motor if there is a current, and fitted with:

- 1) a life buoy connected to a Manila cracker cable with a diameter of 10 millimetres and at least 15 metres long;
- 2) a pikepole;
- 3) safety jackets in adequate numbers for the number of lifeguards;
- 4) oars;

(b) if there is a current, a cable running across the stretch of water with floaters attached thereto capable of supporting a person in the water;

(c) an alarm system for triggering rescue operations.

A given person shall be specifically appointed for directing rescue operations.

DIVISION XXXII TRANSPORTING WORKERS

362. Exception: This section does not apply to automobiles used in general as common carriers.**363. Application of the Highway Code:** Any automobile used for transporting workers shall be arranged and used in compliance with the Highway Code (R.S.Q., c. C.-24.2) and its regulations, except insofar as they are modified under this section.**364. Prohibited transport:** The hauling of workers in trailers and semi-trailers is prohibited.**365. Other safety standards:** The vehicle used for transporting workers shall:

(a) be driven by a person who has an appropriate licence issued in compliance with the Highway Code (R.S.Q., c. C-24.2);

(b) be examined and maintained so as to protect the safety and ensure the workers' security and physical well-being.

366. Safety equipment: Any vehicle used primarily or regularly for transporting workers shall be equipped with a first aid kit in compliance with the Regulation respecting minimum standards for first aid and care approved by Order-in-Council 1922-84 dated August 22, 1984, as it reads at the time that it applies.

Furthermore, if the vehicle is a bus, it shall be equipped with:

(a) a dry chemical fire extinguisher, of a type not less than 2-A:10-B:C, approved by the Underwriters' Laboratories of Canada;

(b) at least 3 pyrotechnic flares, 3 flashlights or 3 reflectors. In the case of a breakdown on the road or less than 3 metres from the roadway, 2 of these devices shall be placed in front of or behind the vehicle on the traffic side, one at a distance of 3 metres and the other at 30 metres from the vehicle. The third device shall be placed based on the specific danger, such as the proximity of a sharp turn, fog, smog or haze conditions, or the presence of a person working on the vehicle.

367. Explosives and dangerous substances: A vehicle used for transporting workers shall not carry:

(a) explosives, unless such explosive are hauled in compliance with the Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6) as it reads at the time that it applies;

(b) dangerous pesticides and flammable and combustible substances, unless these substances are carried in receivers designed for this purpose and outside the compartments occupied by the driver or passengers.

368. Sharp tools: All sharp tools carried in the driver's or the passengers' compartment shall be:

(a) placed in boxes or covered containers;

(b) protected by scabbards covering the sharp edge and secured to the body of the vehicle outside of the aisles.

369. Measures for protecting passengers: Simultaneous transporting of both workers and materials in the same compartment is subject to the following conditions:

(a) in the case of small materials, as long as a stowing device prevents any movement of materials likely to injure passengers;

(b) in the case of bulk material, if a safety device prevents this material from filling the place reserved for passengers.

370. Prohibition: No worker shall ride on a vehicle load while the vehicle is in motion.

DIVISION XXXIII FINAL PROVISIONS

371. Replaced regulations: This regulation replaces the Regulation respecting industrial and commercial establishments (R.R.Q. 1981, c. S-2.1, r.9) and the Regulation respecting the quality of the work environment (R.R.Q., 1981, c. S-2.1, r.15).

372. Repealed regulation: The Safety Code for the wood-working industry (R.R.Q. 1981, c. S-2.1, r.5) is repealed.

373. The Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6), amended by the regulation approved by Order in Council 749-83 dated April 13, 1983 and replaced by the regulation adopted on November 17 and 18, 1983 and published in the *Gazette officielle du Québec* on February 8, 1984 and amended by the regulations approved by Orders in Council 21-85 dated January 9, 1985, 1959-86 and 1960-86 dated December 16, 1986, 53-90 and 54-90 dated January 17, 1990, 995-91 dated July 10, 1991, 807-92 dated May 27, 1992, 213-93 dated February 17, 1993 and 329-94 dated March 9, 1994 and amended by section 54 of chapter 74 of the Statutes of Québec 1996, is further amended by the replacement of the words “Schedule A of the Regulation respecting the quality of the environment (R.R.Q., 1981, c. S-2.1, r.15) “by the words “Schedule I of the Regulation respecting occupational health and safety, approved by Order in Council — dated —” (*indicate here the number and the date of the Order in Council by which this regulation is approved*), wherever they may be found under sections 2.10.8, 3.10.17, 3.21.2 and 8.3.1.

374. This code is amended by the replacement of the words “section 13 of the Regulation respecting the quality of the work environment (R.R.Q., 1981, c. S-2.1, r.15)” by the words “section 46 of the Regulation respecting occupational health and safety approved by Order in Council — dated —” (*indicate here the number and the date of the Order in Council by which this regulation is approved*), wherever they may be found under sections 3.21.3 and 3.23.16.

375. The Regulation respecting occupational health and safety in mines and amending various regulatory provisions approved by Order in Council 213-93 dated February 17, 1993, amended by the regulations approved by Orders in Council 1326-95 dated October 4, 1995, 374-97 dated March 19, 1997 and 782-97 dated June 11, 1997 is further amended, under section 85, by the replacement of the words “under sections 5 and 7 of the Regulation respecting the quality of the work environment (R.R.Q., 1981, c. S-2.1, r.15) and in its Schedule A” by the words “under sections 43 and 44 of the Regulation respecting the quality of the work environment, approved by Order in Council — dated — and in its Schedule I” (*indicate here the number and the date of the Order in Council by which this regulation is approved*).

376. This regulation is amended, by the replacement of “Schedule A” by “Schedule I”, wherever it may be found under sections 97 and 102.

377. This regulation is amended by the replacement of “section 5 “by “section 44, wherever it may be found under sections 96 and 403.

378. The Regulation respecting safety and health in foundry works (R.R.Q., 1981, c. S-2.1, r.20), amended by the regulation approved by Order in Council 1960-86 dated December 16, 1986, is further amended, under section 9, by:

(a) the replacement, in paragraph *e*, of the words “section 5.2.1 of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)” by the words “Division XV of the Regulation respecting the quality of the work environment, approved by Order in Council — dated —” (*indicate here the number and the date of the Order in Council by which this regulation is approved*);

(b) the replacement, in paragraph *f*, of the words “in subsection 5.1 of the Regulation respecting industrial and commercial establishments” by the words “under Divisions XII, XIII and XIV of the Regulation respecting the quality of the work environment”.

379. Section 138 of this regulation is amended by the replacement of the words “under section 12.4.1 of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)” by the words “under section 349 of the Regulation respecting the quality of the work environment”.

380. Section 139 of this regulation is amended by the replacement of the words “under section 12.3.1 of the Regulation respecting industrial and commercial es-

tablishments” by the words “under section 348 of the Regulation respecting the quality of the work environment”.

381. Section 140 of this regulation is amended by the replacement of the words “under section 12.7.1 of the Regulation respecting industrial and commercial establishments” by the words “under section 350 of the Regulation respecting the quality of the work environment”.

382. The Regulation respecting forestry operations (R.R.Q., 1981, c. S-2.1, r.22) is amended, under section 3, by the deletion of the words “as defined in the Regulation respecting industrial and commercial establishments (1981, c. S-2.1, r.9).

383. Section 15 of this regulation is amended by the replacement of the words “of sections 8.4.3, 8.4.4, 8.4.5 and 8.4.6 of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)” by the words “of sections 280 to 284 of the Regulation respecting the quality of the work environment, approved by Order in Council ——— dated ———” (*indicate here the number and the date of the Order in Council by which this regulation is approved*).

384. Section 44 of this regulation is amended by the replacement, in paragraph *a*, of the words “exceeds the maximum permissible levels at the job site, according to Schedule 3 of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)” by the words “exceeds the standards at the job site provided under sections 142 to 146 of the Regulation respecting the quality of the work environment, for any time period indicated therein.”

385. Section 51 of this regulation is amended by the replacement of the words “under sections 12.9.1 and 12.9.2 of the Regulation respecting industrial and commercial establishments” by the words “under sections 359 and 360 of the Regulation respecting the quality of the work environment”.

386. Section 63 of this regulation is amended by the replacement of the words “by vehicles complying with Division XIII of the Regulation respecting industrial and commercial establishments “by the words “in compliance with Division XXXII of the Regulation respecting the quality of the work environment”.

387. Coming into force: This regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

«**SCHEDULE 1**»
(a, 44, 45, 48, 69, 111 and 306)

PERMISSIBLE EXPOSURE VALUES FOR GASES,
DUSTS, FUMES, VAPOURS OR MISTS IN THE
WORK ENVIRONMENT

Notes and Definitions

The present schedule must be read in accordance with the following notations and definitions:

1) CARCINOGENS:

The designations under “carcinogen” in the Designation and remarks column refer to the following:

C1: carcinogenic effect detected in humans

C2: carcinogenic effect suspected in humans

C3: carcinogenic effect detected in animals. Results of studies relating to the carcinogenicity of these substances in animals are not necessarily applicable to humans.

2) CAS:

Number given by the Chemical Abstracts Service, a division of the American Chemical Society, for the identification of a substance (see part IV).

3) C: CEILING:

The designation “C” in the STEV/Ceiling column refers to a concentration never be exceeded during any length of time whatsoever.

4) EM:

A substance to which exposure must be reduced to a minimum in accordance with section 45.

5) EXCURSION LIMITS:

These limits apply to substances which do not have a short-term exposure value. Provided the time-weighted average exposure value is not exceeded, excursions in exposure levels may exceed 3 times that value for a cumulative period not exceeding a total of 30 minutes during a workday. Notwithstanding the foregoing, none of those excursions in exposure levels may exceed 5 times the time-weighted average exposure value during any length of time whatsoever.

6) mg/m³: milligram per cubic metre (milligram of substance per cubic metre of air).

7) Pc: SKIN (percutaneous):

The designation "Pc" in the Designation and remarks column refers to the potentially significant contribution to the overall exposure by the cutaneous route. Exposure is by contact with vapours or, of probable greater significance, by direct skin contact with the substance. The cutaneous route includes mucous membranes and the eyes.

8) ppm: part per million (parts of gas or vapour per million parts of airborne contaminants per volume measured at 25°C and 101,3 kilopascals).

9) Rd: Respirable dust.

10) RESPIRABLE FIBRES:

(Other than respirable asbestos fibres): Objects, other than respirable asbestos fibres, longer than 5 µm, having a diameter of less than 3 µm and a ratio of length to diameter of more than 3:1.

11) RP:

A substance which may not be recirculated in accordance with section 111.

12) S: SENSITISER:

The designation "S" in the Designation and remarks column refers to a repeated exposure to a substance causing a sensitization, e.g. an organism reaction, in the form of an allergic response (immunologic) of the respiratory tree, the mucous, the conjunctivas or the skin.

13) SIMPLE ASPHYXIANT:

A physiologically inert gas which acts primarily by displacing airborne oxygen and that can cause a decrease in the percentage in volume of airborne oxygen below the 19,5 % provided for in section 43 and required to maintain blood oxygen saturation.

14) STEV: SHORT-TERM EXPOSURE VALUE:

The 15-minute time-weighted average concentration for exposure to a chemical substance (in the form of gases, dusts, fumes, vapours or mists), present in the air in a worker's respiratory zone which should not be exceeded at any time during a workday, even if the time-weighted average exposure value is not exceeded.

Exposures above the time-weighted average exposure value and below the short-term exposure value should not be longer than 15 consecutive minutes and should not occur more than 4 times per day. There should be at least 60 minutes between such exposures.

15) Td: Total dust.

16) TWAEV: TIME-WEIGHTED AVERAGE EXPOSURE VALUE:

The time-weighted average concentration for an 8-hour workday and a 40-hour workweek of a chemical substance (in the form of gases, dusts, fumes, vapours or mists) present in the air in a worker's respiratory zone.

NOTES DEFINITIONS:

Note 1 — The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.

Note 2a — Permissible asbestos exposure values in number of respirable fibres per cm³.

Note 2b — Permissible recirculation concentration of asbestos respirable dust: 0,1 mg/m³.

Note 3 — Where the use of these products is permitted.

Note 4 — Permissible exposure values in number of respirable fibres per cm³.

PART I
PERMISSIBLE EXPOSURE VALUES FOR AIRBORNE CONTAMINANTS

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Abate		See Temephos				
Acetaldehyde	[75-07-0]	25	45			C3
Acetic acid	[64-19-7]	10	25	15	37	
Acetic anhydride	[108-24-7]	5	21			
Acetone	[67-64-1]	750	1780	1000	2380	
Acetone cyanohydrin	[75-86-5]			C4,7	C5	Pc
Acetonitrile	[75-05-8]	40	67	60	101	
Acetophenone	[98-86-2]	10	49			
Acetylene	[74-86-2]	Simple asphyxiant				
Acetylene dichloride		See 1,2-Dichloroethylene				
Acetylene tetrabromide		See 1,1,2,2-Tetrabromoethane				
Acetylsalicylic acid (Aspirin)	[50-78-2]		5			
Acrolein	[107-02-8]	0,1	0,23	0,3	0,69	
Acrylamide	[79-06-1]		0,03			Pc,C2,EM
Acrylic acid	[79-10-7]	2	5,9			Pc
Acrylonitrile	[107-13-1]	2	4,3			Pc,C2,RP,EM
Actinolite		See Asbestos				
Adipic acid	[124-04-9]		5			
Adiponitrile	[111-69-3]	2	8,8			Pc
Aldrin	[309-00-2]		0,25			Pc
Allyl alcohol	[107-18-6]	2	4,8	4	9,5	Pc
Allyl chloride		See 3-Chloropropene				
Allyl glycidyl ether (AGE)	[106-92-3]	5	23	10	47	
Allyl propyl disulfide	[2179-59-1]	2	12	3	18	

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Aluminum (as Al)	[7429-90-5]					
Alkyls			2			
Metal			10			
Pyrotechnical powders			5			
Soluble salts			2			
Welding fumes			5			
Aluminum oxide (as Al)	[1344-28-1]				10	<i>Td, note 1</i>
4-Aminodiphenyl	[92-67-1]	Without applicable permissible exposure value				<i>Pc, C1, RP, EM</i>
2-Aminoethanol	[141-43-5]	3	7,5	6	15	
2-Aminopyridine	[504-29-0]	0,5	1,9			
3-Amino-1,2,4-triazole		<i>See Amitrole</i>				
Amitrole	[61-82-5]		0,2			<i>C3, RP</i>
Ammonia	[7664-41-7]	25	17	35	24	
Ammonium chloride fume	[12125-02-9]		10	20		
Ammonium perfluorooctanoate	[3825-26-1]		0,1			<i>Pc</i>
Ammonium sulfamate	[7773-06-0]		10			
Amosite		<i>See Asbestos</i>				
n-Amyl acetate	[628-63-7]	100	532			
sec-Amyl acetate	[626-38-0]	125	665			
Aniline	[62-53-3]	2	7,6			<i>Pc</i>
o-Anisidine	[90-04-0]	0,1	0,5			<i>Pc, C3</i>
p-Anisidine	[104-94-9]	0,1	0,5			<i>Pc</i>
Anthophyllite		<i>See Asbestos</i>				
Antimony [7440-36-0], metal and compounds (as Sb)			0,5			
Antimony trioxide (as Sb)	[1309-64-4]		0,5			<i>C3</i>
Antimony trioxide, production (as Sb)		Without applicable permissible exposure value				<i>C2, RP, EM</i>
ANTU (α -Naphthylthiourea)	[86-88-4]		0,3			
Argon	[7440-37-1]	Simple asphyxiant				

Substance	[#CAS]	TWA/EV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Arsenic, elemental [7440-38-2], and inorganic compounds (except Arsine), (as As)			0,1			
Arsenic trioxide, production	[1327-53-3]	Without applicable permissible exposure value				C2,RP,EM
Arsine	[7784-42-1]	0,05	0,16			
Asbestos (note 2a) (note 2b)						
Actinolite	[12172-67-7]		1 fibre/cm ³		5 fibres/cm ³	CI,EM
Amosite (note 3)	[12172-73-5]		0,2 fibre/cm ³		1 fibre/cm ³	CI,EM
Anthophyllite	[17068-78-9]		1 fibre/cm ³		5 fibres/cm ³	CI,EM
Chrysotile	[12001-29-5]		1 fibre/cm ³		5 fibres/cm ³	CI,EM
Crocidolite (note 3)	[12001-28-4]		0,2 fibre/cm ³		1 fibre/cm ³	CI,EM
Tremolite	[14567-73-8]		1 fibre/cm ³		5 fibres/cm ³	CI,EM
Asphalt (petroleum) fumes	[8052-42-4]		5			
Aspirin		See Acetylsalicylic acid				
Atrazine	[1912-24-9]		5			
Attapulgit		See Fibres-Natural Mineral Fibres				
Azinphos-methyl	[86-50-0]		0,2			Pc
Barium [7440-39-3], soluble compounds (as Ba)			0,5			
Barium sulfate	[7727-43-7]		10 5			Td, note 1 Rd, note 1
Benomyl	[17804-35-2]	0,84	10			
Benz(a)anthracene	[56-55-3]	Without applicable permissible exposure value				C2,EM
Benzene	[71-43-2]	1	3	5	15,5	CI,RP,EM
Benzidine (production)	[92-87-5]	Without applicable permissible exposure value				Pc,CI,RP,EM
Benzo(a)pyrene	[50-32-8]		0,005			C2,RP,EM
Benzo(b)fluoranthene	[205-99-2]	Without applicable permissible exposure value				C2,EM
p-Benzoquinone	[106-51-4]	0,1	0,44			
Benzoyl peroxide	[94-36-0]		5			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Benzyl chloride	[100-44-7]	1	5,2			
Beryllium [7440-41-7], metal and compounds (as Be)			0,002			C2,RP,EM
Biphenyl	[92-52-4]	0,2	1,3			
Bismuth telluride (as Bi ₂ Te ₃)						
Se-doped			5			
Undoped	[1304-82-1]		10			
Borax		See Sodium tetraborate, decahydrate				
Boron oxide	[1303-86-2]		10			
Boron tribromide	[10294-33-4]			C1	C10	
Boron trifluoride	[7637-07-2]			C1	C2,8	
Bromacil	[314-40-9]		10			
Bromine	[7726-95-6]	0,1	0,66	0,2	1,3	
Bromine pentafluoride	[7789-30-2]	0,1	0,72			
Bromochloromethane		See Chlorobromomethane				
2-Bromo-2-chloro-1,1,1-trifluoroethane		See Halothane				
Bromoethane		See Ethyl bromide				
Bromoethylene		See Vinyl bromide				
Bromoform	[75-25-2]	0,5	5,2			Pc
Bromomethane		See Methyl bromide				
Bromotrifluoromethane	[75-63-8]	1000	6090			
1,3-Butadiene	[106-99-0]	2	4,4			C2,EM
Butane	[106-97-8]	800	1900			
Butanethiol		See Butyl mercaptan				
2-Butanone		See Methyl ethyl ketone (MEK)				
2-Butoxyethanol	[111-76-2]	25	121			Pc
n-Butyl acetate	[123-86-4]	150	713	200	950	
sec-Butyl acetate	[105-46-4]	200	950			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
tert-Butyl acetate	[540-88-5]	200	950			
n-Butyl acrylate	[141-32-2]	10	52			
n-Butyl alcohol	[71-36-3]			C50	C152	<i>Pc</i>
sec-Butyl alcohol	[78-92-2]	100	303			
tert-Butyl alcohol	[75-65-0]	100	303			
Butyl cellosolve®		See 2-Butoxyethanol				
tert-Butyl chromate (as CrO ₃)	[1189-85-1]				C0,1	<i>Pc</i>
n-Butyl glycidyl ether (BGE)	[2426-08-6]	25	133			
n-Butyl lactate	[138-22-7]	5	30			
Butyl mercaptan	[109-79-5]	0,5	1,8			
n-Butylamine	[109-73-9]			C5	C15	<i>Pc</i>
o-sec-Butylphenol	[89-72-5]	5	31			<i>Pc</i>
p-tert-Butyltoluene	[98-51-1]	1	6,1			
Cadmium elemental and compounds (as Cd)	[7440-43-9]		0,025			<i>C2,EM</i>
Calcium carbonate	[1317-65-3]		10			<i>Td, note 1</i>
Calcium cyanamide	[156-62-7]		0,5			
Calcium hydroxide	[1305-62-0]		5			
Calcium oxide	[1305-78-8]		2			
Calcium silicate (synthetic)	[1344-95-2]		10			<i>Td, note 1</i>
Calcium sulfate	[7778-18-9]		10 5			<i>Td, note 1</i> <i>Rd, note 1</i>
Camphor (synthetic)	[76-22-2]	2	12	3	19	
Caprolactam Dust Vapour	[105-60-2]		1 23		3 46	
Captafol	[2425-06-1]		0,1			<i>Pc</i>
Captan	[133-06-2]		5			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Carbaryl	[63-25-2]		5			
Carbofuran	[1563-66-2]		0,1			
Carbon black	[1333-86-4]		3,5			
Carbon dioxide	[124-38-9]	5000	9000	30000	54000	
Carbon disulfide	[75-15-0]	4	12	12	36	<i>Pc</i>
Carbon monoxide	[630-08-0]	35	40	200	230	
Carbon tetrabromide	[558-13-4]	0,1	1,4	0,3	4,1	
Carbon tetrachloride	[56-23-5]	5	31	10	63	<i>Pc, C2, EM</i>
Carbon, fibres		<i>See</i> Fibres-Organic Synthetic Fibres				
Carbonyl chloride		<i>See</i> Phosgene				
Carbonyl fluoride	[353-50-4]	2	5,4	5	13	
Catechol	[120-80-9]	5	23			<i>Pc</i>
Cellosolve® acetate		<i>See</i> 2-Ethoxyethyl acetate				
Cellulose (paper fibres)	[9004-34-6]		10			<i>Td, note 1</i>
Ceramic (fibres)		<i>See</i> Fibres-Artificial Vitreous Mineral Fibres				
Cesium hydroxide	[21351-79-1]		2			
Chlordane	[57-74-9]		0,5			<i>Pc</i>
Chlorinated camphene	[8001-35-2]		0,5		1	<i>Pc, C3</i>
Chlorinated diphenyl oxide	[55720-99-5]		0,5			
Chlorine	[7782-50-5]	0,5	1,5	1	2,9	
Chlorine dioxide	[10049-04-4]	0,1	0,28	0,3	0,83	
Chlorine trifluoride	[7790-91-2]			C0,1	C0,38	
2-Chloro-6-(trichloromethyl) pyridine		<i>See</i> Nitrapyrin				
Chloroacetaldehyde	[107-20-0]			C1	C3,2	
Chloroacetone	[78-95-5]			C1	C3,8	<i>Pc</i>
α-Chloroacetophenone	[532-27-4]	0,05	0,32			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Chloroacetyl chloride	[79-04-9]	0,05	0,23	0,15	0,69	<i>Pc</i>
Chlorobenzene	[108-90-7]	50	230			
o-Chlorobenzylidene malononitrile	[2698-41-1]			C0,05	C0,39	<i>Pc</i>
Chlorobromomethane	[74-97-5]	200	1060			
2-Chloro-1,3-butadiene		See β -Chloroprene				
Chlorodifluoromethane	[75-45-6]	1000	3540			
Chlorodiphenyl (42% chlorine)	[53469-21-9]		1			<i>Pc,C2,EM</i>
Chlorodiphenyl (54% chlorine)	[11097-69-1]		0,5			<i>Pc,C2,EM</i>
1-Chloro-2,3-epoxypropane		See Epichlorohydrin				
Chloroethane		See Ethyl chloride				
2-Chloroethanol		See Ethylene chlorohydrin				
bis (Chloroethyl) ether		See Dichloroethyl ether				
Chloroethylene		See Vinyl chloride (monomer)				
Chloroform	[67-66-3]	5	24,4			<i>C2,RP,EM</i>
Chloromethane		See Methyl chloride				
Chloromethyl methyl ether	[107-30-2]	Without applicable permissible exposure value				<i>C1,RP,EM</i>
bis (Chloromethyl) ether	[542-88-1]	0,001	0,0047			<i>C1,RP,EM</i>
p-Chloronitrobenzene		See p-Nitrochlorobenzene				
1-Chloro-1-nitropropane	[600-25-9]	2	10			
Chloropentafluoroethane	[76-15-3]	1000	6320			
Chloropicrin	[76-06-2]	0,1	0,67			
β -Chloroprene	[126-99-8]	10	36			<i>Pc</i>
3-Chloropropene	[107-05-1]	1	3	2	6	
2-Chloropropionic acid	[598-78-7]	0,1	0,44			<i>Pc</i>
o-Chlorostyrene	[2039-87-4]	50	283	75	425	
o-Chlorotoluene	[95-49-8]	50	259			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Chlorpyrifos	[2921-88-2]		0,2			<i>Pc</i>
Chromite ore processing (chromate) (as Cr)			0,05			<i>CI,RP,EM</i>
Chromium (metal)	[7440-47-3]		0,5			
Chromium (II) compounds (as Cr)			0,5			
Chromium (III) compounds (as Cr)			0,5			
Chromium (VI) compounds (as Cr) Certain water insoluble			0,05			<i>CI,RP,EM</i>
Chromium (VI) compounds (as Cr) Water soluble			0,05			
Chromyl chloride	[14977-61-8]	0,025	0,16			
Chrysene	[218-01-9]	Without applicable permissible exposure value				<i>C2,RP,EM</i>
Chrysotile		See Asbestos				
Clopidol	[2971-90-6]		10			
Coal dust (less than 5% crystalline silica)	[53570-85-7]		2			<i>Rd</i>
Coal dust (more than 5% crystalline silica)			0,1			<i>Rd, of quartz</i>
Coal tar pitch volatiles, as benzene solubles	[65996-93-2]		0,2			<i>CI,RP,EM</i>
Cobalt [7440-48-4], elemental, and inorganic compounds (as Co)			0,02			<i>C3</i>
Cobalt hydrocarbonyl (as Co)	[16842-03-8]		0,1			
Cobalt tetracarbonyl (as Co)	[10210-68-1]		0,1			
Continious filament fibres (fibrous glass)		See Fibres-Artificial Vitreous Mineral Fibres				
Copper [7440-50-8], fume (as Cu)			0,2			
Copper [7440-50-8], dusts & mists (as Cu)			1			
Corundum	[1302-74-5]		10			<i>Td, note 1</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Cotton dust, cotton waste processing operation of waste recycling and garnetting.			1,0			
Cotton dust, in yarn manufacturing and cotton washing operations.			0,2			
Cotton dust, in textile mill waste house operations or in yarn manufacturing to dust from “lower-grade washed cotton”.			0,5			
Cotton dust, in textile slashing and weaving operations.			0,75			
Coyden®			See Clopidol			
Crag®			See Sesone			
Cresol (all isomers)	[1319-77-3]	5	22			Pc
Cristobalite			See Silica			
Crocidolite			See Asbestos			
Crotonaldehyde	[4170-30-3]	2	5,7			
Crufomate®	[299-86-5]		5			
Cumene	[98-82-8]	50	246			Pc
Cyanamide	[420-04-2]		2			
Cyanides (as CN)				C10	C11	Pc
Cyanogen	[460-19-5]	10	21			
Cyanogen chloride	[506-77-4]			C0,3	C0,75	
Cyclohexane	[110-82-7]	300	1030			
Cyclohexanol	[108-93-0]	50	206			Pc
Cyclohexanone	[108-94-1]	25	100			Pc
Cyclohexene	[110-83-8]	300	1010			
Cyclohexylamine	[108-91-8]	10	41			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Cyclonite	[121-82-4]		1,5			<i>Pc</i>
Cyclopentadiene	[542-92-7]	75	203			
Cyclopentane	[287-92-3]	600	1720			
Cyhexatin	[13121-70-5]		5			
2,4-D	[94-75-7]	10				<i>C2,EM</i>
DDT (Dichlorodiphenyltrichloroethane)	[50-29-3]		1			<i>C3</i>
Decaborane	[17702-41-9]	0,05	0,25	0,15	0,75	<i>Pc</i>
Demeton®	[8065-48-3]	0,01	0,11			<i>Pc</i>
Di-sec-octyl phthalate	[117-81-7]		5		10	<i>C3</i>
2,6-Di-tert-butyl-p-cresol	[128-37-0]		10			
Diacetone alcohol	[123-42-2]	50	238			
4,4'-Diaminodiphenylmethane		See 4,4'-Methylene dianiline				
1,2-Diaminoethane		See Ethylenediamine				
1,6-Diaminohexane	[124-09-4]	0,5	2,3			
Diatomaceous earth		See Silica				
Diazinon®	[333-41-5]		0,1			<i>Pc</i>
Diazomethane	[334-88-3]	0,2	0,34			
Diborane	[19287-45-7]	0,1	0,11			
Dibromodifluoromethane		See Difluorodibromomethane				
1,2-Dibromoethane	[106-93-4]	20	155			<i>Pc,C2,RP,EM</i>
Dibrom®		See Naled				
Dibutyl phenyl phosphate	[2528-36-1]	0,3	3,5			<i>Pc</i>
Dibutyl phosphate	[107-66-4]	1	8,6	2	17	
Dibutyl phthalate	[84-74-2]		5			
2-N-Dibutylaminoethanol	[102-81-8]	2	14			<i>Pc</i>
3,3'-Dichloro-4,4'-diaminodiphenylmethane		See 4,4'-Methylene bis (2-chloroaniline)				

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
1,3-Dichloro-5,5-dimethyl hydantoin	[118-52-5]		0,2		0,4	
Dichloroacetylene	[7572-29-4]			C0,1	C0,39	
o-Dichlorobenzene	[95-50-1]			C50	C301	
p-Dichlorobenzene	[106-46-7]	50	301	110	660	C3
3,3'-Dichlorobenzidine	[91-94-1]	Without applicable permissible exposure value				Pc, C2, RP, EM
1,4-Dichloro-2-butene	[764-41-0]	0,005	0,025			Pc, C2, EM
Dichlorodifluoromethane	[75-71-8]	1000	4950			
3,5-Dichloro-2,6-dimethyl-4-pyridinol		See Clopidol				
Dichlorodiphenyltrichloroethane		See DDT				
1,1-Dichloroethane	[75-34-3]	100	405			
1,2-Dichloroethane	[107-06-2]	1	4	2	8	C2, EM
Dichloroethyl ether	[111-44-4]	5	29	10	58	Pc
1,1-Dichloroethylene	[75-35-4]	1	4			
1,2-Dichloroethylene	[540-59-0]	200	793			
Dichlorofluoromethane	[75-43-4]	10	42			
Dichloromethane		See Methylene chloride				
1,1-Dichloro-1-nitroethane	[594-72-9]	2	12			
(2,4-Dichlorophenoxy) acetic acid		See 2,4-D				
1,2-Dichloropropane	[78-87-5]	75	347	110	508	
Dichloropropene (cis and trans isomers)	[542-75-6]	1	4,5			Pc, C3
2,2-Dichloropropionic acid	[75-99-0]	1	5,8			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	[76-14-2]	1000	6990			
Dichlorvos	[62-73-7]	0,1	0,9			Pc
Dicrotophos	[141-66-2]		0,25			Pc
4,4'-Dicyclohexyl methane diisocyanate		See Methylene bis (4-cyclohexylisocyanate)				

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Dicyclopentadiene	[77-73-6]	5	27			
Dicyclopentadienyl iron	[102-54-5]		10			
Dieldrin	[60-57-1]		0,25			Pc
Diethanolamine	[111-42-2]	3	13			Pc
Diethyl ether	[60-29-7]	400	1210	500	1520	
Diethyl ketone	[96-22-0]	200	705			
Diethyl phthalate	[84-66-2]		5			
Diethylamine	[109-89-7]	5	15	15	45	Pc
2-Diethylaminoethanol	[100-37-8]	10	48			Pc
Diethylene triamine	[111-40-0]	1	4,2			Pc
Di(2-ethylhexyl) phthalate		See Di-sec-octyl phthalate				
Difluorodibromomethane	[75-61-6]	100	858			
Diglycidyl ether (DGE)	[2238-07-5]	0,1	0,53			
Dihydroxybenzene		See Hydroquinone				
Diisobutyl ketone	[108-83-8]	25	145			
1,6-Diisocyanatohexane		See Hexamethylene diisocyanate				
Diisopropyl ether	[108-20-3]	250	1040	310	1300	
Diisopropylamine	[108-18-9]	5	21			Pc
Dimethoxymethane		See Methylal				
Dimethyl carbamoyl chloride	[79-44-7]	Without applicable permissible exposure value				C2,RP,EM
Dimethyl sulfate	[77-78-1]	0,1	0,52			Pc,C2,RP,EM
2,6-Dimethyl-4-heptanone		See Diisobutyl ketone				
N,N-Dimethylacetamide	[127-19-5]	10	36			Pc
Dimethylamine	[124-40-3]	10	18			
Dimethylaminobenzene		See Xylidine				
N,N-Dimethylaniline	[121-69-7]	5	25	10	50	Pc

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Dimethylbenzene		See Xylene				
N,N-Dimethylformamide	[68-12-2]	10	30			Pc,C2,EM
1,1-Dimethylhydrazine	[57-14-7]	0,5	1,2			Pc,C2,RP,EM
Dimethylnitrosoamine		See N-Nitrosodimethylamine				
Dimethylphthalate	[131-11-3]		5			
Dinitolmide	[148-01-6]		5			
Dinitro-ortho-cresol	[534-52-1]		0,2			Pc
3,5-Dinitro-ortho-toluamide		See Dinitolmide				
Dinitrobenzene (all isomers)	[528-29-0; 99-65-0; 100-25-4; 25154-54-4]	0,15	1			Pc
Dinitrotoluene	[25321-14-6]		0,75			Pc,C3
Dioxane	[123-91-1]	25	90			Pc,C3
Dioxathion	[78-34-2]		0,2			Pc
Diphenyl		See Biphenyl				
Diphenyl ether		See Phenyl ether				
Diphenylamine	[122-39-4]		10			
4,4'-Diphenylmethane diisocyanate (MDI)		See Methylene bis (4-phenyl isocyanate)				
Dipropylene glycol monomethyl ether	[34590-94-8]	100	600	150	900	
Diquat	[231-36-7]		0,5 0,1			Td, note 1 Rd, note 1
Disulfiram	[97-77-8]		2			
Disulfoton	[298-04-4]		0,1			
Disyston®		See Disulfoton				
Diuron	[330-54-1]		10			
Divinyl benzene	[1321-74-0]	10	53			
Dursban®		See Chlorpyrifos				
Dust, inert or nuisance particulates		See Particulates Not Otherwise Classified (PNOC)				

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Dyfonate®		See Fonofos				
Emery	[12415-34-8]		10			<i>Td, note 1</i>
Endosulfan	[115-29-7]		0,1			<i>Pc</i>
Endrin	[72-20-8]		0,1			<i>Pc</i>
Enflurane	[13838-16-9]	75	566			
Enzymes, proteolytic		See Subtilisins				
Epichlorohydrin	[106-89-8]	2	7,6			<i>Pc,C2,PR,EM</i>
EPN	[2104-64-5]		0,1			<i>Pc</i>
2,3-Epoxy-1-propanol		See Glycidol				
1,2-Epoxypropane		See Propylene oxide				
Erionite		See Fibres-Natural Mineral Fibres				
Ethane	[74-84-0]	Simple asphyxiant				
Ethanethiol		See Ethyl mercaptan				
Ethanol		See Ethyl alcohol				
Ethanolamine		See 2-Aminoethanol				
Ethion	[563-12-2]		0,4			<i>Pc</i>
2-Ethoxyethanol (EGEE)	[110-80-5]	5	18			<i>Pc</i>
2-Ethoxyethyl acetate (EGEEA)	[111-15-9]	5	27			<i>Pc</i>
Ethyl acetate	[141-78-6]	400	1440			
Ethyl acrylate	[140-88-5]	5	20	15	61	<i>C3</i>
Ethyl alcohol	[64-17-5]	1000	1880			
Ethyl amyl ketone	[541-85-5]	25	131			
Ethyl benzene	[100-41-4]	100	434	125	543	
Ethyl bromide	[74-96-4]	50	223			<i>Pc,C3</i>
Ethyl butyl ketone	[106-35-4]	50	234			
Ethyl chloride	[75-00-3]	1000	2640			
Ethyl ether		See Diethyl ether				

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Ethyl formate	[109-94-4]	100	303			
Ethyl mercaptan	[75-08-1]	0,5	1,3			
Ethyl silicate	[78-10-4]	10	85			
Ethylamine	[75-04-7]	10	18			
Ethylene	[74-85-1]	Simple asphyxiant				
Ethylene bromide		See Vinyl bromide				
Ethylene chlorohydrin	[107-07-3]			C1	C3,3	Pc
Ethylene dibromide		See 1,2-Dibromoethane				
Ethylene dichloride		See 1,2-Dichloroethane				
Ethylene glycol (vapour and mist)	[107-21-1]			C50	C127	
Ethylene glycol dinitrate	[628-96-6]			C0,2	C1,2	Pc
Ethylene glycol monoethyl ether		See 2-Ethoxyethanol				
Ethylene glycol monoethyl ether acetate		See 2-Ethoxyethyl acetate				
Ethylene glycol monomethyl ether		See 2-Methoxyethanol				
Ethylene glycol monomethyl ether acetate		See 2-Methoxyethyl acetate				
Ethylene imine	[151-56-4]	0,5	0,88			Pc
Ethylene oxide	[75-21-8]	1	1,8			C2,RP,EM
Ethylenediamine	[107-15-3]	10	25			
Ethylglycol acetate		See 2-Ethoxyethyl acetate				
Ethylidene chloride		See 1,1-Dichloroethane				
Ethylidene norbornene	[16219-75-3]			C5	C25	
N-Ethylmorpholine	[100-74-3]	5	24			Pc
Fenamiphos	[22224-92-6]		0,1			Pc
Fensulfotion	[115-90-2]		0,1			
Fenthion	[55-38-9]		0,2			Pc
Ferbam	[14484-64-1]		10			

Substance	[#CAS]	TWA/EV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Ferrovandium (dust)	[12604-58-9]		1		3	
Fibres-Artificial Vitreous Mineral Fibres (note 4)						
Fibrous glass, continuous filament			10			<i>Td, note 1</i>
Fibrous glass, microfibrés			1 fibre/cm ³			
Insulation wool fibres, Glass wool			2 fibres/cm ³			<i>C3</i>
Insulation wool fibres, Rock wool			1 fibre/cm ³			<i>C2,EM</i>
Insulation wool fibres, Slag wool			1 fibre/cm ³			<i>C2,EM</i>
Refractory fibres (ceramic or others)			1 fibre/cm ³			<i>C3</i>
Fibres-Natural Mineral Fibres (note 4)						
Attapulgite	[12174-11-7]		1 fibre/cm ³			<i>C1,EM</i>
Erionite	[66733-21-9]		Prohibited use			<i>C1</i>
Talc			See Talc (fibrous)			
Wollastonite	[13983-17-0]		10			<i>Td, note 1</i>
			5			<i>Rd, note 1</i>
Fibres-Organic Synthetic Fibres						
Carbon and graphite fibres			10			<i>Td, note 1</i>
			5			<i>Rd, note 1</i>
Para-aramides fibres (Kevlar®, Twaron®)			1 fibre/cm ³			
Polyolefines fibres			10			<i>Td, note 1</i>
Fibrous glass dust			See Fibres-Artificial Vitreous Mineral Fibres			
Fluorides (as F)			2,5			
Fluorine	[7782-41-4]		0,1	0,2		
Fluorotrichloromethane			See Trichlorofluoromethane			
Fonofos	[944-22-9]		0,1			<i>Pc</i>
Formaldehyde	[50-00-0]			C2	C3	<i>C2,EM</i>
Formamide	[75-12-7]		10	18		<i>Pc</i>
Formic acid	[64-18-6]		5	9,4	10	19
Formic aldehyde			See Formaldehyde			
Freon® 11			See Trichlorofluoromethane			
Freon® 112			See 1,1,1,2-Tetrachloro-1,2-difluoroethane			
Freon® 113			See 1,1,2-Trichloro-1,2,2-trifluoroethane			
Freon® 114			See 1,2-Dichloro-1,1,2,2-tetrafluoroethane			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Freon® 115		See Chloropentafluoroethane				
Freon® 12		See Dichlorodifluoromethane				
Freon® 12B2		See Difluorodibromomethane				
Freon® 21		See Dichlorofluoromethane				
Freon® 22		See Chlorodifluoromethane				
Furadan®		See Carbofuran				
Furfural	[98-01-1]	2	7,9			Pc
Furfuryl alcohol	[98-00-0]	10	40	15	60	Pc
Gasoline	[8006-61-9]	300	890	500	1480	C3
Germanium tetrahydride	[7782-65-2]	0,2	0,63			
Glass wool		See Fibres-Artificial Vitreous Mineral Fibres				
Glass, fibrous or dust		See Fibres-Artificial Vitreous Mineral Fibres				
Glutaraldehyde	[111-30-8]			C0,2	C0,82	
Glycerin (mist)	[56-81-5]		10			
Glycidol	[556-52-5]	25	76			
Glycol monoethyl ether		See 2-Ethoxyethanol				
Grain dust (oat, wheat, barley)			4			Td, note 1
Graphite (fibres)		See Fibres-Organic Synthetic Fibres				
Graphite (natural)	[7782-42-5]		2,5			Rd, note 1
Graphite (synthetic, except fibres)			5			Rd, note 1
Guthion®		See Azinphos-methyl				
Gypsum	[13397-24-5]		10 5			Td, note 1 Rd, note 1
Hafnium	[7440-58-6]		0,5			
Halothane	[151-67-7]	50	404			
Helium	[7440-59-7]	Simple asphyxiant				
Heptachlor	[76-44-8]		0,05			Pc,C3

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Heptachlor epoxide	[1024-57-3]		0,05			<i>Pc,C3</i>
n-Heptane	[142-82-5]	400	1640	500	2050	
2-Heptanone		See Methyl n-amyl ketone				
3-Heptanone		See Ethyl butyl ketone				
Hexachlorobenzene	[118-74-1]		0,025			<i>Pc,C3</i>
Hexachlorobutadiene	[87-68-3]	0,02	0,21			<i>Pc,C2,RP,EM</i>
Hexachlorocyclopentadiene	[77-47-4]	0,01	0,11			
Hexachloroethane	[67-72-1]	1	9,7			<i>Pc,C3</i>
Hexachloronaphthalene	[1335-87-1]		0,2			<i>Pc</i>
Hexafluoroacetone	[684-16-2]	0,1	0,68			<i>Pc</i>
Hexamethylphosphoramide	[680-31-9]	Without applicable permissible exposure value				<i>Pc,C2,RP,EM</i>
Hexamethylene diisocyanate	[822-06-0]	0,005	0,034			<i>EM,S</i>
n-Hexane	[110-54-3]	50	176			
Hexane (other isomers)		500	1760	1000	3500	
2-Hexanone		See Methyl n-butyl ketone				
Hexone		See Methyl isobutyl ketone				
sec-Hexyl acetate	[108-84-9]	50	295			
Hexylene glycol	[107-41-5]			C25	C121	
Hydrazine	[302-01-2]	0,1	0,13			<i>Pc,C2,RP,EM</i>
Hydrogen	[1333-74-0]	Simple asphyxiant				
Hydrogen bromide	[10035-10-6]			C3	C9,9	
Hydrogen chloride	[7647-01-0]			C5	C7,5	
Hydrogen cyanide	[74-90-8]			C10	C11	<i>Pc</i>
Hydrogen fluoride (as F)	[7664-39-3]			C3	C2,6	
Hydrogen peroxide	[7722-84-1]	1	1,4			
Hydrogen selenide (as Se)	[7783-07-5]	0,05	0,16			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Hydrogen sulfide	[7783-06-4]	10	14	15	21	
Hydrogenated terphenyls	[61788-32-7]	0,5	4,9			
Hydroquinone	[123-31-9]		2			
Hydroquinone monomethyl ether		See 4-Methoxyphenol				
4-Hydroxy-4methyl-2-pentanone		See Diacetone alcohol				
2-Hydroxypropyl acrylate	[999-61-1]	0,5	2,8			Pc
2,2'-Iminodiethanol		See Diethanolamine				
Indene	[95-13-6]	10	48			
Indium [7440-74-6] and compounds (as In)			0,1			
Insulation wool fibres		See Fibres-Artificial Vitreous Mineral Fibres				
Iodine	[7553-56-2]			C0,1	C1,0	
Iodoform	[75-47-8]	0,6	10			
Iodomethane		See Methyl iodide				
Iron dicyclopentadienyl		See Dicyclopentadienyl iron				
Iron pentacarbonyl (as Fe)	[13463-40-6]	0,1	0,23	0,2	0,45	
Iron salts, soluble (as Fe)			1,0			
Iron trioxide, dust and fume (as Fe)	[1309-37-1]		5			
Isoamyl acetate	[123-92-2]	100	532			
Isoamyl alcohol	[123-51-3]	100	361	125	452	
Isobutyl acetate	[110-19-0]	150	713			
Isobutyl alcohol	[78-83-1]	50	152			
Isocyanate oligomers		Without applicable permissible exposure value				S
Isooctyl alcohol	[26952-21-6]	50	266			Pc
Isophorone	[78-59-1]			C5	C28	
Isophorone diisocyanate	[4098-71-9]	0,005	0,045			EM,S

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Isopropoxyethanol	[109-59-1]	25	106			<i>Pc</i>
Isopropyl acetate	[108-21-4]	250	1040	310	1290	
Isopropyl alcohol	[67-63-0]	400	985	500	1230	
Isopropyl ether		See Diisopropyl ether				
Isopropyl glycidyl ether (IGE)	[4016-14-2]	50	238	75	356	
Isopropylamine	[75-31-0]	5	12	10	24	
N-Isopropylaniline	[768-52-5]	2	11			<i>Pc</i>
Isopropylbenzene		See Cumene				
Kaolin	[1332-58-7]		5			<i>Rd, note 1</i>
Ketene	[463-51-4]	0,5	0,86	1,5	2,6	
L.P.G. (Liquified petroleum gas)	[68476-85-7]	1000	1800			
Lead [7439-92-1] and inorganic compounds, dusts and fumes (as Pb)			0,15			
Lead arsenate (as Pb ₃ (AsO ₄) ₂)	[3687-31-8]		0,15			
Lead chromate (as Cr)	[7758-97-6]		0,012			<i>C2,RP,EM</i>
Lead tetraethyl (as Pb)	[78-00-2]		0,05			<i>Pc</i>
Lead tetramethyl (as Pb)	[75-74-1]		0,05			<i>Pc</i>
Limestone		See Calcium carbonate				
Lindane	[58-89-9]		0,5			<i>Pc</i>
Lithium hydride	[7580-67-8]		0,025			
Magnesite	[546-93-0]		10			<i>Td, note 1</i>
Magnesium oxide fume (as Mg)	[1309-48-4]		10			
Malathion	[121-75-5]		10			<i>Pc</i>
Maleic anhydride	[108-31-6]	0,25	1,0			
Manganese (as Mn)	[7439-96-5]					
Dust and compounds			5			
Fume			1		3	

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Manganese cyclopentadienyl tricarbonyl (as Mn)	[12079-65-1]		0,1			<i>Pc</i>
Manganese methyl cyclopentadienyl tricarbonyl (as Mn)	[12108-13-3]		0,2			<i>Pc</i>
Manganese tetroxide	[1317-35-7]		1			
Marble		<i>See</i> Calcium carbonate				
Mequinol		<i>See</i> 4-Methoxyphenol				
Mercury [7439-97-6], alkyl compounds (as Hg)			0,01		0,03	<i>Pc</i>
Mercury [7439-97-6], all forms except alkyl compounds (as Hg)			0,1			<i>Pc</i>
Aryl and inorganic compounds			0,05			<i>Pc</i>
Mercury vapor						<i>Pc</i>
Mesityl oxide	[141-79-7]	10	40			
Methacrylic acid	[79-41-4]	20	70			
Methane	[74-82-8]	Simple asphyxiant				
Methanethiol		<i>See</i> Methyl mercaptan				
Methanol		<i>See</i> Methyl alcohol				
Methomyl	[16752-77-5]		2,5			
Methoxychlor	[72-43-5]		10			
2-Methoxyethanol (EGME)	[109-86-4]	5	16			<i>Pc</i>
2-Methoxyethyl acetate (EGMEA)	[110-49-6]	5	24			<i>Pc</i>
4-Methoxyphenol	[150-76-5]		5			
1-Methoxy-2-propanol		<i>See</i> Propylene glycol monomethyl ether				
Methyl acetate	[79-20-9]	200	606	250	757	
Methyl acetylene	[74-99-7]	1000	1640			
Methyl acetylene-propadiene mixture (MAPP)	[59355-75-8]	1000	1640	1250	2050	
Methyl acrylate	[96-33-3]	10	35			<i>Pc</i>
Methyl alcohol	[67-56-1]	200	262	250	328	<i>Pc</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Methyl amyl alcohol	[108-11-2]	25	104	40	167	<i>Pc</i>
Methyl n-amyl ketone	[110-43-0]	50	233			
Methyl bromide	[74-83-9]	5	19			<i>Pc</i>
Methyl tert-butyl ether	[1634-04-4]	40	144			
Methyl n-butyl ketone	[591-78-6]	5	20			<i>Pc</i>
Methyl cellosolve®		<i>See 2-Methoxyethanol</i>				
Methyl cellosolve® acetate		<i>See 2-Methoxyethyl acetate</i>				
Methyl chloride	[74-87-3]	50	103	100	207	<i>Pc</i>
Methyl chloroform	[71-55-6]	350	1910	450	2460	
Methyl 2-cyanoacrylate	[137-05-3]	2	9,1	4	18	
Methyl demeton	[8022-00-2]		0,5			<i>Pc</i>
Methyl ethyl ketone (MEK)	[78-93-3]	50	150	100	300	
Methyl ethyl ketone peroxide	[1338-23-4]			C0,2	C1,5	
Methyl formate	[107-31-3]	100	246	150	368	
Methyl glycol		<i>See 2-Methoxyethanol</i>				
Methyl glycol acetate		<i>See 2-Methoxyethyl acetate</i>				
Methyl hydrazine	[60-34-4]			C0,2	C0,38	<i>Pc,C2,RP,EM</i>
Methyl iodide	[74-88-4]	2	12			<i>Pc,C2,EM</i>
Methyl isoamyl ketone	[110-12-3]	50	234			
Methyl isobutyl carbinol		<i>See Methyl amyl alcohol</i>				
Methyl isobutyl ketone	[108-10-1]	50	205	75	307	
Methyl isocyanate	[624-83-9]	0,02	0,047			<i>Pc</i>
Methyl isopropyl ketone	[563-80-4]	200	705			
Methyl mercaptan	[74-93-1]	0,5	0,98			
Methyl methacrylate (monomer)	[80-62-6]	100	410			
Methyl parathion	[298-00-0]		0,2			<i>Pc</i>
Methyl propyl ketone	[107-87-9]	150	530			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Methyl silicate	[681-84-5]	1	6			
α-Methyl styrene	[98-83-9]	50	242	100	483	
Methylacrylonitrile	[126-98-7]	1	2,7			Pc
Methylal	[109-87-5]	1000	3110			
Methylamine	[74-89-5]	5	6,4			
N-Methylaniline	[100-61-8]	0,5	2,2			Pc
Methylcyclohexane	[108-87-2]	400	1610			
Methylcyclohexanol	[25639-42-3]	50	234			
o-Methylcyclohexanone	[583-60-8]	50	229	75	344	Pc
Methylene chloride	[75-09-2]	50	174			C2,EM
4,4'-Methylene bis (2-chloroaniline) (MOCA)	[101-14-4]	0,02	0,22			Pc,C2,RP,EM
Methylene bis (4-cyclohexylisocyanate)	[5124-30-1]	0,005	0,054			EM,S
4,4'-Methylene dianiline	[101-77-9]	0,1	0,81			Pc,C2,EM
Methylene bis (4-phenyl isocyanate) (MDI)	[101-68-8]	0,005	0,051			EM,S
5-Methyl-3-heptanone		<i>See Ethyl amyl ketone</i>				
N-Methyl-2,4,6-Trinitrophenyl nitramine		<i>See Tetryl</i>				
Metribuzin	[21087-64-9]		5			
Mevinphos®		<i>See Phosdrin</i>				
Mica	[12001-26-2]		3			Rd, note 1
Microfibres (fibrous glass)		<i>See Fibres-Artificial Vitreous Mineral Fibres</i>				
Mineral oil (mist)			5		10	
Mineral wool fibres		<i>See Fibres-Artificial Vitreous Mineral Fibres</i>				
Molybdenum (as Mo)	[7439-98-7]					
Insoluble compounds			10			
Soluble compounds			5			
Monocrotophos	[6923-22-4]		0,25			Pc

Substance	[#CAS]	TWA&EV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Morpholine	[110-91-8]	20	71			<i>Pc</i>
Naled (Dibrom®)	[300-76-5]		3			<i>Pc</i>
Naphtha		See VM&P Naphtha				
Naphthalene	[91-20-3]	10	52	15	79	
β-Naphthylamine	[91-59-8]	Without applicable permissible exposure value				<i>CI,RP,EM</i>
α-Naphthylthiourea		See ANTU				
Nemacur®		See Fenamiphos				
Neon	[7440-01-9]	Simple asphyxiant				
Nialate®		See Ethion				
Nickel	[7440-02-0]					
Metal			1			
Insoluble compounds (as Ni)			1			
Soluble compounds (as Ni)			0,1			
Nickel carbonyl (as Ni)	[13463-39-3]	0,001	0,007			
Nickel sulfide roasting, fume and dust (as Ni)			1			<i>CI,RP,EM</i>
Nicotine	[54-11-5]		0,5			<i>Pc</i>
Nitrapyrin	[1929-82-4]		10		20	
Nitric acid	[7697-37-2]	2	5,2	4	10	
Nitric oxide		See Nitrogen monoxide				
p-Nitroaniline	[100-01-6]		3			<i>Pc</i>
Nitrobenzene	[98-95-3]	1	5			<i>Pc</i>
p-Nitrochlorobenzene	[100-00-5]	0,1	0,64			<i>Pc</i>
4-Nitrodiphenyl	[92-93-3]	Without applicable permissible exposure value				<i>Pc,CI,RP,EM</i>
Nitroethane	[79-24-3]	100	307			
Nitrogen	[7727-37-9]	Simple asphyxiant				
Nitrogen dioxide	[10102-44-0]	3	5,6			
Nitrogen monoxide	[10102-43-9]	25	31			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Nitrogen trifluoride	[7783-54-2]	10	29			
Nitroglycerin (NG)	[55-63-0]			C0,2	C1,86	<i>Pc</i>
Nitromethane	[75-52-5]	100	250			
1-Nitropropane	[108-03-2]	25	91			
2-Nitropropane	[79-46-9]	10	36			<i>C2,RP,EM</i>
N-Nitrosodimethylamine	[62-75-9]	Without applicable permissible exposure value				<i>Pc,C2,RP,EM</i>
Nitrotoluene (all isomers) [88-72-2; 99-08-1; 99-99-0; 1321-12-6]		2	11			<i>Pc</i>
Nitrotrichloromethane		<i>See Chloropicrin</i>				
Nitrous oxide	[10024-97-2]	50	90			
Nonane	[111-84-2]	200	1050			
Nuisance particulates		<i>See Particulates Not Otherwise Classified (PNOC)</i>				
Octachloronaphthalene	[2234-13-1]		0,1		0,3	<i>Pc</i>
Octane	[111-65-9]	300	1400	375	1750	
Oil mist, mineral		<i>See Mineral oil (mist)</i>				
Osmium tetroxide (as Os)	[20816-12-0]	0,0002	0,0016	0,0006	0,0047	
Oxalic acid	[144-62-7]		1		2	
Oxygen difluoride	[7783-41-7]			C0,05	C0,11	
Ozone	[10028-15-6]			C0,1	C0,2	
Para-aramides fibres		<i>See Fibres-Organic Synthetic Fibres</i>				
Paraffin wax, fume	[8002-74-2]		2			
Paraquat, respirable particulates	[4685-14-7]		0,1			
Parathion	[56-38-2]		0,1			<i>Pc</i>
Particulate polycyclic aromatic hydrocarbons (PPAH)		<i>See Coal tar pitch volatiles</i>				
Particulates Not Otherwise Classified (PNOC)			10			<i>Td, note 1</i>
Pentaborane	[19624-22-7]	0,005	0,013	0,015	0,039	

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Pentachloronaphthalene	[1321-64-8]		0,5			<i>Pc</i>
Pentachloronitrobenzene	[82-68-8]		0,5			
Pentachlorophenol	[87-86-5]		0,5			<i>Pc,C2,RP,EM</i>
Pentaerythritol	[115-77-5]		10			
n-Pentane	[109-66-0]	120	350			
2-Pentanone		<i>See Methyl propyl ketone</i>				
3-Pentanone		<i>See Diethyl ketone</i>				
Perchloroethylene	[127-18-4]	25	170	100	685	<i>C3</i>
Perchloromethyl mercaptan	[594-42-3]	0,1	0,76			
Perchloryl fluoride	[7616-94-6]	3	13	6	25	
Perfluorodimethylcetone		<i>See Hexafluoroacetone</i>				
Perfluoroisobutylene	[382-21-8]			C0,01	C0,082	
Perlite	[83969-76-0]		10 5			<i>Td, note 1</i> <i>Rd, note 1</i>
Petroleum distillates		<i>See Gasoline, Stoddard solvent, VM&P Naphtha</i>				
Phenacyl chloride		<i>See α-Chloroacetophenone</i>				
Phenol	[108-95-2]	5	19			<i>Pc</i>
Phenothiazine	[92-84-2]		5			<i>Pc</i>
Phenyl ether, vapour	[101-84-8]	1	7	2	14	
Phenyl glycidyl ether (PGE)	[122-60-1]	1	6,1			<i>Pc,S,C3</i>
Phenyl mercaptan	[108-98-5]	0,5	2,3			
meta-Phenylenediamine	[108-45-2]		0,1			
ortho-Phenylenediamine	[95-54-5]		0,1			<i>C2,EM</i>
para-Phenylenediamine	[106-50-3]		0,1			<i>Pc,S</i>
Phenylethylene		<i>See Styrene (monomer)</i>				
Phenylhydrazine	[100-63-0]	0,1	0,44			<i>Pc,C2,RP,EM</i>
N-Phenyl-β-naphthylamine	[135-88-6]	Without applicable permissible exposure value				<i>C2,RP,EM</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Phenylphosphine	[638-21-1]			C0,05	C0,23	
Phorate	[298-02-2]		0,05		0,2	<i>Pc</i>
Phosdrin	[7786-34-7]	0,01	0,092	0,03	0,27	<i>Pc</i>
Phosgene	[75-44-5]	0,1	0,40			
Phosphine	[7803-51-2]	0,3	0,42	1	1,4	
Phosphoric acid	[7664-38-2]		1		3	
Phosphorus (yellow)	[7723-14-0]		0,1			
Phosphorus oxychloride	[10025-87-3]	0,1	0,63			
Phosphorus pentachloride	[10026-13-8]	0,1	0,85			
Phosphorus pentasulfide	[1314-80-3]		1		3	
Phosphorus trichloride	[7719-12-2]	0,2	1,1	0,5	2,8	
Phthalic anhydride	[85-44-9]	1	6,1			
m-Phthalodinitrile	[626-17-5]		5			
Picloram	[1918-02-1]		10			
Picric acid	[88-89-1]		0,1			<i>Pc</i>
Pindone	[83-26-1]		0,1			
Piperazine dihydrochloride	[142-64-3]		5			
Plaster of Paris	[26499-65-0]		10 5			<i>Td, note 1</i> <i>Rd, note 1</i>
Platinum Metal Soluble salts (as Pt)	[7440-06-4]		1 0,002			
Polychlorobiphenyls		<i>See Chlorodiphenyl</i>				
Polyolefines fibres		<i>See Fibres-Organic Synthetic Fibres</i>				
Polytetrafluoroethylene decomposition products	[9002-84-0]	Determine quantitatively the decomposition products in the air and express the results as Fluorides (See Fluorides standards)				
Portland cement	[65997-15-1]		10 5			<i>Td, note 1</i> <i>Rd, note 1</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Potassium hydroxide	[1310-58-3]					P2
Precipitated silica						See Silica — Amorphous, precipitated
Propane	[74-98-6]	1000	1800			
Propane sultone	[1120-71-4]					Without applicable permissible exposure value C2,RP,EM
Propanol						See n-Propyl alcohol
Propargyl alcohol	[107-19-7]	1	2,3			Pc
β-Propiolactone	[57-57-8]	0,5	1,5			C2,RP,EM
Propionic acid	[79-09-4]	10	30			
Propoxur	[114-26-1]		0,5			
n-Propyl acetate	[109-60-4]	200	835	250	1040	
n-Propyl alcohol	[71-23-8]	200	492	250	614	Pc
n-Propyl nitrate	[627-13-4]	25	107	40	172	
Propylene	[115-07-1]					Simple asphyxiant
Propylene dichloride						See 1,2-Dichloropropane
Propylene glycol dinitrate	[6423-43-4]	0,05	0,34			Pc
Propylene glycol monomethyl ether	[107-98-2]	100	369	150	553	
Propylene imine	[75-55-8]	2	4,7			Pc,C2,RP,EM
Propylene oxide	[75-56-9]	20	48			C2,RP,EM
Propyne						See Methyl acetylene
Propyne-Propadiene mixture						See Methyl acetylene-propadiene mixture (MAPP)
Pyrethrum	[8003-34-7]		5			
Pyridine	[110-86-1]	5	16			
Pyrocatechol						See Catechol
Quartz						See Silica — Crystalline, Quartz
Quinone						See p-Benzoquinone
RDX						See Cyclonite

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Refractory fibres		See Fibres-Artificial Vitreous Mineral Fibres				
Resorcinol	[108-46-3]	10	45	20	90	
Rhodium	[7440-16-6]					
Metal and insoluble compounds (as Rh)			0,1			
Soluble compounds (as Rh)			0,001			
Rock wool		See Fibres-Artificial Vitreous Mineral Fibres				
Ronnel	[299-84-3]		10			
Rosin core solder pyrolysis products (as Formaldehyde)	[8050-09-7]		0,1			S
Rotenone	[83-79-4]		5			
Rouge			10			<i>Td, note 1</i>
Rubber solvent (Naphtha)	[8030-30-6]	400	1590			
Selenium [7782-49-2] and compounds (as Se)			0,2			
Selenium hexafluoride (as Se)	[7783-79-1]	0,05	0,16			
Sencor®		See Metribuzin				
N-Serve®		See Nitrapyrin				
Sesone	[136-78-7]		10			
Sevin®		See Carbaryl				
Silane		See Silicon tetrahydride				
Silica — Amorphous, Diatomaceous earth (uncalcined)	[61790-53-2]		6			<i>Td, note 1</i>
Silica — Amorphous, fumes	[69012-64-2]		2			<i>Rd, note 1</i>
Silica — Amorphous, fused	[60676-86-0]		0,1			<i>Rd, note 1</i>
Silica — Amorphous, gel	[63231-67-4] (112926-00-8)		6			<i>Rd, note 1</i>
Silica — Amorphous, precipitated	[1343-98-2]		6			<i>Td, note 1</i>
Silica — Crystalline, Cristobalite	[14464-46-1]		0,05			<i>Rd</i>
Silica — Crystalline, Quartz	[14808-60-7]		0,1			<i>Rd,C2,EM</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Silica — Crystalline, Tridymite	[15468-32-3]		0,05			<i>Rd</i>
Silica — Crystalline, Tripoli	[1317-95-9]		0,1			<i>Rd</i>
Silicon	[7440-21-3]		10			<i>Td, note 1</i>
Silicon carbide (non fibrous)	[409-21-2]		10			<i>Td, note 1</i>
Silicon tetrahydride	[7803-62-5]	5	6,6			
Silver Metal Soluble compounds (as Ag)	[7440-22-4]		0,1 0,01			
Slag wool		See Fibres-Artificial Vitreous Mineral Fibres				
Soapstone	[14378-12-2]		6 3			<i>Td, note 1</i> <i>Rd, note 1</i>
Sodium azide	[26628-22-8]			C0,11	C0,3	
Sodium bisulfite	[7631-90-5]		5			
Sodium 2,4-dichlorophenoxyethyl sulfate		See Sesone				
Sodium fluoroacetate	[62-74-8]		0,05		0,15	<i>Pc</i>
Sodium hydroxide	[1310-73-2]				C2	
Sodium metabisulfite	[7681-57-4]		5			
Sodium tetraborate, anhydre	[1330-43-4]		1			
Sodium tetraborate, decahydrate or borax	[1303-96-4]		5			
Sodium tetraborate, pentahydrate	[12045-88-4]		1			
Starch	[9005-25-8]		10			<i>Td, note 1</i>
Stibine (as Sb)	[7803-52-3]	0,1	0,51			
Stoddard solvent	[8052-41-3]	100	525			
Strychnine	[57-24-9]		0,15			
Styrene (monomer)	[100-42-5]	50	213	100	426	<i>Pc, C3</i>
Subtilisins [1395-21-7; 9014-01-1] (Proteolytic enzymes as 100 % pure crystalline enzyme)					C0,00006	

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Succinaldehyde	[638-37-9]	1	4			<i>Pc</i>
Sucrose	[57-50-1]		10			
Sulfometuron methyl	[74222-97-2]		5			
Sulfotep	[3689-24-5]		0,2			<i>Pc</i>
Sulfur dioxide	[7446-09-5]	2	5,2	5	13	
Sulfur hexafluoride	[2551-62-4]	1000	5970			
Sulfur monochloride	[10025-67-9]			C1	C5,5	
Sulfur pentafluoride	[5714-22-7]			C0,01	C0,1	
Sulfur tetrafluoride	[7783-60-0]			C0,1	C0,44	
Sulfuric acid	[7664-93-9]		1		3	
Sulfuryl fluoride	[2699-79-8]	5	21	10	42	
Sulprofos	[35400-43-2]		1			
Systox		<i>See Demeton®</i>				
2,4,5-T	[93-76-5]		10			<i>C2,RP,EM</i>
Talc, fibrous (note 4)			1 fibre/cm ³			<i>C1,EM</i>
Talc, non fibrous	[14807-96-6]		3			<i>Rd</i>
Tantalum [7440-25-7], metal and oxide dusts (as Ta)			5			
TEDP		<i>See Sulfotep</i>				
Tellurium [13494-80-9] and compounds (as Te)			0,1			
Tellurium hexafluoride (as Te)	[7783-80-4]	0,02	0,10			
Temephos	[3383-96-8]		10			
TEPP	[107-49-3]	0,004	0,047			<i>Pc</i>
Terephthalic acid	[100-21-0]		10			
Terphenyls	[26140-60-3]			C0,5	C4,7	
1,1,2,2-Tetrabromoethane	[79-27-6]	1	14			
1,1,1,2-Tetrachloro-2,2-difluoroethane	[76-11-9]	500	4170			

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
1,1,2,2-Tetrachloro-1,2-difluoroethane	[76-12-0]	500	4170			
1,1,2,2-Tetrachloroethane	[79-34-5]	1	6,9			<i>Pc</i>
Tetrachloroethylene		See Perchloroethylene				
Tetrachloromethane		See Carbon tetrachloride				
Tetrachloronaphthalene	[1335-88-2]		2			
Tetraethyl lead		See Lead tetraethyl				
Tetraethyl pyrophosphate		See TEPP				
Tetrahydrofuran	[109-99-9]	100	300			
Tetramethyl lead		See Lead tetramethyl				
Tetramethyl succinonitrile	[3333-52-6]	0,5	2,8			<i>Pc</i>
Tetranitromethane	[509-14-8]	0,005	0,04			<i>C2</i>
Tetrasodium pyrophosphate	[7722-88-5]		5			
Tetryl	[479-45-8]		1,5			
Thallium, elemental [7440-28-0], and soluble compounds (as Tl)			0,1			<i>Pc</i>
Thimet®		See Phorate				
4,4'-Thiobis (6-tert-butyl-m-cresol)	[96-69-5]		10			
Thiodan®		See Endosulfan				
Thiodiphenylamine		See Phenothiazine				
Thioglycolic acid	[68-11-1]	1	3,8			<i>Pc</i>
Thionyl chloride	[7719-09-7]			C1	C4,9	
Thiram®	[137-26-8]		5			
Tin	[7440-31-5]					
Metal			2			
Organic compounds (as Sn)			0,1	0,2		<i>Pc</i>
Oxide and inorganic compounds, except SnH ₄ (as Sn)			2			
Titanium dioxide	[13463-67-7]		10			<i>Td, note 1</i>
o-Tolidine	[119-93-7]	Without applicable permissible exposure value				<i>Pc, C2, RP, EM</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Toluene	[108-88-3]	50	188			<i>Pc</i>
Toluene diisocyanate (TDI) (isomers mixture)	[26471-62-5]	0,005	0,036	0,02	0,14	<i>EM,S</i>
o-Toluidine	[95-53-4]	2	8,8			<i>Pc,C2,RP,EM</i>
m-Toluidine	[108-44-1]	2	8,8			<i>Pc</i>
p-Toluidine	[106-49-0]	2	8,8			<i>Pc,C2,EM</i>
Toxaphene		<i>See Chlorinated camphene</i>				
Tremolite		<i>See Asbestos</i>				
Tribromomethane		<i>See Bromoform</i>				
Tributyl phosphate	[126-73-8]	0,2	2,2			
Trichloroacetic acid	[76-03-9]	1	6,7			
1,2,4-Trichlorobenzene	[120-82-1]			C5	C37	
1,1,2-Trichloroethane	[79-00-5]	10	55			<i>Pc</i>
1,1,1-Trichloroethane		<i>See Methyl chloroform</i>				
Trichloroethylene	[79-01-6]	50	269	200	1070	
Trichlorofluoromethane	[75-69-4]			C1000	C5620	
Trichloromethane		<i>See Chloroform</i>				
Trichloronaphthalene	[1321-65-9]		5			<i>Pc</i>
Trichloronitromethane		<i>See Chloropicrin</i>				
2,4,5-Trichlorophenoxyacetic acid		<i>See 2,4,5-T</i>				
1,2,3-Trichloropropane	[96-18-4]	10	60			<i>Pc</i>
1,1,2-Trichloro-1,2,2-trifluoroethane	[76-13-1]	1000	7670	1250	9590	
Tri-o-cresyl phosphate	[78-30-8]		0,1			<i>Pc</i>
Tricyclohexyltin hydroxide		<i>See Cyhexatin</i>				
Tridymite		<i>See Silica — Crystalline</i>				
Triethanolamine	[102-71-6]		5			<i>S</i>
Triethylamine	[121-44-8]	5	20,5	15	61,5	<i>Pc</i>

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Trifluorobromomethane		See Bromotrifluoromethane				
Trimellitic anhydride	[552-30-7]				C0,04	S
Trimethyl benzene	[25551-13-7]	25	123			
Trimethyl phosphite	[121-45-9]	2	10			
Trimethylamine	[75-50-3]	5	12	15	36	
2,4,6-Trinitrophenol		See Picric acid				
2,4,6-Trinitrophenylmethylnitramine		See Tetryl				
2,4,6-Trinitrotoluene (TNT)	[118-96-7]		0,5			Pc
Triphenyl amine	[603-34-9]		5			
Triphenyl phosphate	[115-86-6]		3			
Tripoli		See Silica — Crystalline				
Tungsten (as W)	[7440-33-7]					
Insoluble compounds			5		10	
Soluble compounds			1		3	
Turpentine	[8006-64-2]	100	556			
Uranium (natural)	[7440-61-1]					
Insoluble compounds (as U)			0,2		0,6	
Soluble compounds (as U)			0,05			
n-Valeraldehyde	[110-62-3]	50	176			
Vanadium pentoxide, fume and respirable dust (as V ₂ O ₅)	[1314-62-1]		0,05			
Vegetable oil mists (except castor, cashew and other similar irritant oils)	[68956-68-3]		10			
Vinyl acetate	[108-05-4]	10	35	15	53	C3
Vinyl benzene		See Styrene (monomer)				
Vinyl bromide	[593-60-2]	5	22			C2,EM
Vinyl chloride (monomer)	[75-01-4]	1	2,5	5	13	C1,RP,EM
Vinyl cyanide		See Acrylonitrile				
Vinyl cyclohexene dioxide	[106-87-6]	10	57			Pc,C2,RP,EM

Substance	[#CAS]	TWAEV		STEV/Ceiling		Designation and remarks
		ppm	mg/m ³	ppm	mg/m ³	
Vinyl toluene	[25013-15-4]	50	242	100	483	
Vinylidene chloride		See 1,1-Dichloroethylene				
VM&P Naphtha	[8032-32-4]	300	1370			
Warfarin	[81-81-2]		0,1			
Welding fumes (not otherwise classified)			5			
Wollastonite		See Fibres-Natural Mineral Fibres				
Wood dust (western red cedar)			2,5			<i>Td, note 1</i>
Wood dust hard and soft, except red cedar			5			<i>Td, note 1</i>
Xylene (o-,m-,p- isomers) [1330-20-7; 95-47-6; 108-38-3; 106-42-3]		100	434	150	651	
m-Xylene- α , α' -diamine	[1477-55-0]				C0,1	<i>Pc</i>
Xylidine (mixed isomers)	[1300-73-8]	0,5	2,5			<i>Pc,C2,EM</i>
Yttrium [7440-65-5], metal and compounds (as Y)			1			
Zinc chloride, fume	[7646-85-7]		1			
Zinc chromates [13530-65-9; 11103-86-9; 37300-23-5] (as Cr)			0,01			<i>CI,RP,EM</i>
Zinc stearate	[557-05-1]		10			
Zinc, oxide	[1314-13-2]					
Dust			10			<i>Td, note 1</i>
Fume			5		10	
Zirconium [7440-67-7] and compounds (as Zr)			5		10	
Zoalene®		See Dinitolmide				

PART II**DAILY EXPOSURE TO A SPECIFIC SUBSTANCE OF A WORKER WORKING AT SEVERAL WORK LOCATIONS**

Where a worker carries out his work at more than one work location during a shift period, each exposure at those locations must be included in the evaluation of the daily average exposure value with respect to any substance listed in Part I of this Schedule.

For that purpose, the method of computation prescribed in the following formula is used:

Daily average exposure value: (in mg/m³ or in ppm)

$$\frac{C_1t_1 + C_2t_2 + \dots + C_nt_n}{t_1 + t_2 + \dots + t_n}$$

Where:

C = measured concentration of a substance at a work location (expressed in mg/m³ or in ppm)

t = duration of exposure to the substance at the same work location (expressed in hours)

1, 2, ... , n = indication of work locations

t₁ + t₂ + ... + t_n = 8 hours

PART III**DAILY EXPOSURE TO SEVERAL SUBSTANCES**

Where two or more substances listed in Part I of this Schedule are present at the work location and where they have similar effects on the same organs of the human body, the effects of these substances are considered to be additive, unless it is established otherwise.

The concentration of the substances in the mixture is computed as follows:

$$Rm = \frac{C_1}{T_1} + \frac{C_2}{T_2} + \dots + \frac{C_n}{T_n}$$

Where:

Rm = sum of the fractions of the mixture

C = measured concentration of a substance at a work location (expressed in mg/m³ or in ppm)

T = permissible time-weighted average exposure value in accordance with Part I of this Schedule

1, 2, 3, ... , n = indication of substances in the mixture.

If Rm is greater than one, the time-weighted average exposure value of the mixture of the substances is exceeded.

PART IV**IDENTIFICATION OF SUBSTANCES ACCORDING TO THEIR CAS NUMBER.**

50-00-0	Formaldehyde
50-29-3	DDT (Dichlorodiphenyltrichloroethane)
50-32-8	Benzo(a)pyrene
50-78-2	Acetylsalicylic acid (Aspirin)
54-11-5	Nicotine
55-38-9	Fenthion
55-63-0	Nitroglycerin
56-23-5	Carbon tetrachloride
56-38-2	Parathion
56-55-3	Benz(a)anthracene
56-81-5	Glycerin
57-14-7	1,1-Dimethylhydrazine
57-24-9	Strychnine
57-50-1	Sucrose
57-57-8	β-Propiolactone
57-74-9	Chlordane
58-89-9	Lindane
60-29-7	Diethyl ether
60-34-4	Methyl hydrazine
60-57-1	Dieldrin
61-82-5	Amitrole
62-53-3	Aniline
62-73-7	Dichlorvos
62-74-8	Sodium fluoroacetate
62-75-9	N-Nitrosodimethylamine
63-25-2	Carbaryl
64-17-5	Ethyl alcohol
64-18-6	Formic acid
64-19-7	Acetic acid
67-56-1	Methyl alcohol
67-63-0	Isopropyl alcohol
67-64-1	Acetone
67-66-3	Chloroform
67-72-1	Hexachloroethane
68-11-1	Thioglycolic acid
68-12-2	N,N-Dimethylformamide
71-23-8	n-Propyl alcohol
71-36-3	n-Butyl alcohol
71-43-2	Benzene
71-55-6	Methyl chloroform
72-20-8	Endrin
72-43-5	Methoxychlor
74-82-8	Methane

74-83-9	Methyl bromide	78-10-4	Ethyl silicate
74-84-0	Ethane	78-30-8	Tri-o-cresyl phosphate
74-85-1	Ethylene	78-34-2	Dioxathion
74-86-2	Acetylene	78-59-1	Isophorone
74-87-3	Methyl chloride	78-83-1	Isobutyl alcohol
74-88-4	Methyl iodide	78-87-5	1,2-Dichloropropane
74-89-5	Methylamine	78-92-2	sec-Butyl alcohol
74-90-8	Hydrogen cyanide	78-93-3	Methyl ethyl ketone (MEK)
74-93-1	Methyl mercaptan	78-95-5	Chloroacetone
74-96-4	Ethyl bromide	79-00-5	1,1,2-Trichloroethane
74-97-5	Chlorobromomethane	79-01-6	Trichloroethylene
74-98-6	Propane	79-04-9	Chloroacetyl chloride
74-99-7	Methyl acetylene	79-06-1	Acrylamide
75-00-3	Ethyl chloride	79-09-4	Propionic acid
75-01-4	Vinyl chloride	79-10-7	Acrylic acid
75-04-7	Ethylamine	79-20-9	Methyl acetate
75-05-8	Acetonitrile	79-24-3	Nitroethane
75-07-0	Acetaldehyde	79-27-6	1,1,2,2-Tetrabromoethane
75-08-1	Ethyl mercaptan	79-34-5	1,1,2,2-Tetrachloroethane
75-09-2	Methylene chloride	79-41-4	Methacrylic acid
75-12-7	Formamide	79-44-7	Dimethyl carbamoyl chloride
75-15-0	Carbon disulfide	79-46-9	2-Nitropropane
75-21-8	Ethylene oxide	80-62-6	Methyl methacrylate (monomer)
75-25-2	Bromoform	81-81-2	Warfarin
75-31-0	Isopropylamine	82-68-8	Pentachloronitrobenzene
75-34-3	1,1-Dichloroethane	83-26-1	Pindone
75-35-4	1,1-Dichloroethylene	83-79-4	Rotenone
75-43-4	Dichlorofluoromethane	84-66-2	Diethyl phthalate
75-44-5	Phosgene	84-74-2	Dibutyl phthalate
75-45-6	Chlorodifluoromethane	85-44-9	Phthalic anhydride
75-47-8	Iodoform	86-50-0	Azinphos-methyl
75-50-3	Trimethylamine	86-88-4	ANTU (α -Naphthylthiourea)
75-52-5	Nitromethane	87-68-3	Hexachlorobutadiene
75-55-8	Propylene imine	87-86-5	Pentachlorophenol
75-56-9	Propylene oxide	88-72-2	Nitrotoluene
75-61-6	Difluorodibromomethane	88-89-1	Picric acid
75-63-8	Bromotrifluoromethane	89-72-5	o-sec-Butylphenol
75-65-0	tert-Butyl alcohol	90-04-0	o-Anisidine
75-69-4	Trichlorofluoromethane	91-20-3	Naphthalene
75-71-8	Dichlorodifluoromethane	91-59-8	β -Naphthylamine
75-74-1	Lead tetramethyl	91-94-1	3,3'-Dichlorobenzidine
75-86-5	Acetone cyanohydrin	92-52-4	Biphenyl
75-99-0	2,2-Dichloropropionic acid	92-67-1	4-Aminodiphenyl
76-03-9	Trichloroacetic acid	92-84-2	Phenothiazine
76-06-2	Chloropicrin	92-87-5	Benzidine (production)
76-11-9	1,1,1,2-Tetrachloro-2,2-difluoroethane	92-93-3	4-Nitrodiphenyl
76-12-0	1,1,2,2-Tetrachloro-1, 2-difluoroethane	93-76-5	2,4,5-T
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	94-36-0	Benzoyl peroxide
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	94-75-7	2,4-D
76-15-3	Chloropentafluoroethane	95-13-6	Indene
76-22-2	Camphor (synthetic)	95-47-6	Xylene
76-44-8	Heptachlor	95-49-8	o-Chlorotoluene
77-47-4	Hexachlorocyclopentadiene	95-50-1	o-Dichlorobenzene
77-73-6	Dicyclopentadiene	95-53-4	o-Toluidine
77-78-1	Dimethyl sulfate	95-54-5	ortho-Phenylenediamine
78-00-2	Lead tetraethyl	96-18-4	1,2,3-Trichloropropane

96-22-0	Diethyl ketone	107-19-7	Propargyl alcohol
96-33-3	Methyl acrylate	107-20-0	Chloroacetaldehyde
96-69-5	4,4'-Thiobis (6-tert-butyl-m-cresol)	107-21-1	Ethylene glycol
97-77-8	Disulfiram	107-30-2	Chloromethyl methyl ether
98-00-0	Furfuryl alcohol	107-31-3	Methyl formate
98-01-1	Furfural	107-41-5	Hexylene glycol
98-51-1	p-tert-Butyltoluene	107-49-3	TEPP
98-82-8	Cumene	107-66-4	Dibutyl phosphate
98-83-9	α -Methyl styrene	107-87-9	Methyl propyl ketone
98-86-2	Acetophenone	107-98-2	Propylene glycol monomethyl ether
98-95-3	Nitrobenzene	108-03-2	1-Nitropropane
99-08-1	Nitrotoluene	108-05-4	Vinyl acetate
99-65-0	Dinitrobenzene	108-10-1	Methyl isobutyl ketone
99-99-0	Nitrotoluene	108-11-2	Methyl amyl alcohol
100-00-5	p-Nitrochlorobenzene	108-18-9	Diisopropylamine
100-01-6	p-Nitroaniline	108-20-3	Diisopropyl ether
100-21-0	Terephthalic acid	108-21-4	Isopropyl acetate
100-25-4	Dinitrobenzene	108-24-7	Acetic anhydride
100-37-8	2-Diethylaminoethanol	108-31-6	Maleic anhydride
100-41-4	Ethyl benzene	108-38-3	Xylene
100-42-5	Styrene (monomer)	108-44-1	m-Toluidine
100-44-7	Benzyl chloride	108-45-2	meta-Phenylenediamine
100-61-8	N-Methylaniline	108-46-3	Resorcinol
100-63-0	Phenylhydrazine	108-83-8	Diisobutyl ketone
100-74-3	N-Ethylmorpholine	108-84-9	sec-Hexyl acetate
101-14-4	4,4'-Methylene bis (2-chloroaniline) (MOCA)	108-87-2	Methylcyclohexane
101-68-8	Methylene bis (4-phenyl isocyanate) (MDI)	108-88-3	Toluene
101-77-9	4,4'-Methylene dianiline	108-90-7	Chlorobenzene
101-84-8	Phenyl ether, vapour	108-91-8	Cyclohexylamine
102-54-5	Dicyclopentadienyl iron	108-93-0	Cyclohexanol
102-71-6	Triethanolamine	108-94-1	Cyclohexanone
102-81-8	2-N-Dibutylaminoethanol	108-95-2	Phenol
104-94-9	p-Anisidine	108-98-5	Phenyl mercaptan
105-46-4	sec-Butyl acetate	109-59-1	Isopropoxyethanol
105-60-2	Caprolactam	109-60-4	n-Propyl acetate
106-35-4	Ethyl butyl ketone	109-66-0	n-Pentane
106-42-3	Xylene	109-73-9	n-Butylamine
106-46-7	p-Dichlorobenzene	109-79-5	Butyl mercaptan
106-49-0	p-Toluidine	109-86-4	2-Methoxyethanol (EGME)
106-50-3	p-Phenylenediamine	109-87-5	Methylal
106-51-4	p-Benzoquinone	109-89-7	Diethylamine
106-87-6	Vinyl cyclohexene dioxide	109-94-4	Ethyl formate
106-89-8	Epichlorohydrin	109-99-9	Tetrahydrofuran
106-92-3	Allyl glycidyl ether (AGE)	110-12-3	Methyl isoamyl ketone
106-93-4	1,2-Dibromoethane	110-19-0	Isobutyl acetate
106-97-8	Butane	110-43-0	Methyl n-amyl ketone
106-99-0	1,3-Butadiene	110-49-6	2-Methoxyethyl acetate (EGMEA)
107-02-8	Acrolein	110-54-3	n-Hexane
107-05-1	3-Chloropropene	110-62-3	n-Valeraldehyde
107-06-2	1,2-Dichloroethane	110-80-5	2-Ethoxyethanol (EGEE)
107-07-3	Ethylene chlorohydrin	110-82-7	Cyclohexane
107-13-1	Acrylonitrile	110-83-8	Cyclohexene
107-15-3	Ethylenediamine	110-86-1	Pyridine
107-18-6	Allyl alcohol	110-91-8	Morpholine
		111-15-9	2-Ethoxyethyl acetate (EGEEA)
		111-30-8	Glutaraldehyde

111-40-0	Diethylene triamine	142-64-3	Piperazine dihydrochloride
111-42-2	Diethanolamine	142-82-5	n-Heptane
111-44-4	Dichloroethyl ether	144-62-7	Oxalic acid
111-65-9	Octane	148-01-6	Dinitolmide
111-69-3	Adiponitrile	150-76-5	4-Methoxyphenol
111-76-2	2-Butoxyethanol	151-56-4	Ethylene imine
111-84-2	Nonane	151-67-7	Halothane
114-26-1	Propoxur	156-62-7	Calcium cyanamide
115-07-1	Propylene	205-99-2	Benzo(b)fluoranthene
115-29-7	Endosulfan	218-01-9	Chrysene
115-77-5	Pentaerythritol	231-36-7	Diquat
115-86-6	Triphenyl phosphate	287-92-3	Cyclopentane
115-90-2	Fensulfothion	298-00-0	Methyl parathion
117-81-7	Di-sec-octyl phthalate	298-02-2	Phorate
118-52-5	1,3-Dichloro-5,5-dimethyl hydantoin	298-04-4	Disulfoton
118-74-1	Hexachlorobenzene	299-84-3	Ronnel
118-96-7	2,4,6-Trinitrotoluene (TNT)	299-86-5	Crufomate®
119-93-7	o-Tolidine	300-76-5	Naled
120-80-9	Catechol	302-01-2	Hydrazine
120-82-1	1,2,4-Trichlorobenzene	309-00-2	Aldrin
121-44-8	Triethylamine	314-40-9	Bromacil
121-45-9	Trimethyl phosphite	330-54-1	Diuron
121-69-7	N,N-Dimethylaniline	333-41-5	Diazinon®
121-75-5	Malathion	334-88-3	Diazomethane
121-82-4	Cyclonite	353-50-4	Carbonyl fluoride
122-39-4	Diphenylamine	382-21-8	Perfluoroisobutylene
122-60-1	Phenyl glycidyl ether (PGE)	409-21-2	Silicon carbide (non fibrous)
123-31-9	Hydroquinone	420-04-2	Cyanamide
123-42-2	Diacetone alcohol	460-19-5	Cyanogen
123-51-3	Isoamyl alcohol	463-51-4	Ketene
123-86-4	n-Butyl acetate	479-45-8	Tetryl
123-91-1	Dioxane	504-29-0	2-Aminopyridine
123-92-2	Isoamyl acetate	506-77-4	Cyanogen chloride
124-04-9	Adipic acid	509-14-8	Tetranitromethane
124-09-4	1,6-Diaminohexane	528-29-0	Dinitrobenzene
124-38-9	Carbon dioxide	532-27-4	α -Chloroacetophenone
124-40-3	Dimethylamine	534-52-1	Dinitro-ortho-cresol
126-73-8	Tributyl phosphate	540-59-0	1,2-Dichloroethylene
126-98-7	Methylacrylonitrile	540-88-5	tert-Butyl acetate
126-99-8	β -Chloroprene	541-85-5	Ethyl amyl ketone
127-18-4	Perchloroethylene	542-75-6	Dichloropropene (cis and trans isomers)
127-19-5	N,N-Dimethylacetamide	542-88-1	bis (Chloromethyl) ether
128-37-0	2,6-Di-tert-butyl-p-cresol	542-92-7	Cyclopentadiene
131-11-3	Dimethylphthalate	546-93-0	Magnesite
133-06-2	Captan	552-30-7	Trimellitic anhydride
135-88-6	N-Phenyl- β -naphthylamine	556-52-5	Glycidol
136-78-7	Sesone	557-05-1	Zinc stearate
137-05-3	Methyl 2-cyanoacrylate	558-13-4	Carbon tetrabromide
137-26-8	Thiram®	563-12-2	Ethion
138-22-7	n-Butyl lactate	563-80-4	Methyl isopropyl ketone
140-88-5	Ethyl acrylate	583-60-8	o-Methylcyclohexanone
141-32-2	n-Butyl acrylate	591-78-6	Methyl n-butyl ketone
141-43-5	2-Aminoethanol	593-60-2	Vinyl bromide
141-66-2	Dicrotophos	594-42-3	Perchloromethyl mercaptan
141-78-6	Ethyl acetate	594-72-9	1,1-Dichloro-1-nitroethane
141-79-7	Mesityl oxide	598-78-7	2-Chloropropionic acid

600-25-9	1-Chloro-1-nitropropane	1344-95-2	Calcium silicate (synthetic)
603-34-9	Triphenyl amine	1395-21-7	Subtilisin
624-83-9	Methyl isocyanate	1477-55-0	m-Xylene- α , α' -diamine
626-17-5	m-Phthalodinitrile	1563-66-2	Carbofuran
626-38-0	sec-Amyl acetate	1634-04-4	Methyl tert-butyl ether
627-13-4	n-Propyl nitrate	1912-24-9	Atrazine
628-63-7	n-Amyl acetate	1918-02-1	Picloram
628-96-6	Ethylene glycol dinitrate	1929-82-4	Nitrapyrin
630-08-0	Carbon monoxide	2039-87-4	o-Chlorostyrene
638-21-1	Phenylphosphine	2104-64-5	EPN
638-37-9	Succinaldehyde	2179-59-1	Allyl propyl disulfide
680-31-9	Hexamethyl phosphoramidate	2234-13-1	Octachloronaphthalene
681-84-5	Methyl silicate	2238-07-5	Diglycidyl ether (DGE)
684-16-2	Hexafluoroacetone	2425-06-1	Captafol
764-41-0	1,4-Dichloro-2-butene	2426-08-6	n-Butyl glycidyl ether (BGE)
768-52-5	N-Isopropylaniline	2528-36-1	Dibutyl phenyl phosphate
822-06-0	Hexamethylene diisocyanate	2551-62-4	Sulfur hexafluoride
944-22-9	Fonofos	2698-41-1	o-Chlorobenzylidene malononitrile
999-61-1	2-Hydroxypropyl acrylate	2699-79-8	Sulfuryl fluoride
1024-57-3	Heptachlor epoxide	2921-88-2	Chlorpyrifos
1120-71-4	Propane sultone	2971-90-6	Clopidol
1189-85-1	tert-Butyl chromate	3333-52-6	Tetramethyl succinonitrile
1300-73-8	Xylidine (mixed isomers)	3383-96-8	Temepfos
1302-74-5	Corundum	3687-31-8	Lead arsenate
1303-86-2	Boron oxide	3689-24-5	Sulfotep
1303-96-4	Sodium tetraborate, decahydrate	3825-26-1	Ammonium perfluorooctanoate
1304-82-1	Bismuth telluride Undoped	4016-14-2	Isopropyl glycidyl ether (IGE)
1305-62-0	Calcium hydroxide	4098-71-9	Isophorone diisocyanate
1305-78-8	Calcium oxide	4170-30-3	Crotonaldehyde
1309-37-1	Iron trioxide	4685-14-7	Paraquat, respirable particulates
1309-48-4	Magnesium oxide	5124-30-1	Methylene bis (4-cyclohexylisocyanate)
1309-64-4	Antimony trioxide	5714-22-7	Sulfur pentafluoride
1310-58-3	Potassium hydroxide	6423-43-4	Propylene glycol dinitrate
1310-73-2	Sodium hydroxide	6923-22-4	Monocrotophos
1314-13-2	Zinc, oxide	7429-90-5	Aluminum
1314-62-1	Vanadium pentoxide	7439-92-1	Lead
1314-80-3	Phosphorus pentasulfide	7439-96-5	Manganese
1317-35-7	Manganese tetroxide	7439-97-6	Mercury
1317-65-3	Calcium carbonate	7439-98-7	Molybdenum
1317-95-9	Silica — Crystalline, Tripoli	7440-01-9	Neon
1319-77-3	Cresol (all isomers)	7440-02-0	Nickel
1321-12-6	Nitrotoluene	7440-06-4	Platinum
1321-64-8	Pentachloronaphthalene	7440-16-6	Rhodium
1321-65-9	Trichloronaphthalene	7440-21-3	Silicon
1321-74-0	Divinyl benzene	7440-22-4	Silver
1327-53-3	Arsenic trioxide	7440-25-7	Tantalum
1330-20-7	Xylene	7440-28-0	Thallium
1330-43-4	Sodium tetraborate, anhydrous	7440-31-5	Tin
1332-58-7	Kaolin	7440-33-7	Tungsten
1333-74-0	Hydrogen	7440-36-0	Antimony
1333-86-4	Carbon black	7440-37-1	Argon
1335-87-1	Hexachloronaphthalene	7440-38-2	Arsenic
1335-88-2	Tetrachloronaphthalene	7440-39-3	Barium
1338-23-4	Methyl ethyl ketone peroxide	7440-41-7	Beryllium
1343-98-2	Silica — Amorphous, precipitated	7440-43-9	Cadmium
1344-28-1	Aluminum oxide	7440-47-3	Chromium

7440-48-4	Cobalt	8006-61-9	Gasoline
7440-50-8	Copper	8006-64-2	Turpentine
7440-58-6	Hafnium	8022-00-2	Methyl demeton
7440-59-7	Helium	8030-30-6	Rubber solvent (Naphtha)
7440-61-1	Uranium	8032-32-4	VM&P Naphtha
7440-65-5	Yttrium	8050-09-7	Rosin
7440-67-7	Zirconium	8052-41-3	Stoddard solvent
7440-74-6	Indium	8052-42-4	Asphalt (petroleum)
7446-09-5	Sulfur dioxide	8065-48-3	Demeton®
7553-56-2	Iodine	9002-84-0	Polytetrafluoroethylene
7572-29-4	Dichloroacetylene	9004-34-6	Cellulose (paper fibres)
7580-67-8	Lithium hydride	9005-25-8	Starch
7616-94-6	Perchloryl fluoride	9014-01-1	Subtilisin
7631-90-5	Sodium bisulfite	10024-97-2	Nitrous oxide
7637-07-2	Boron trifluoride	10025-67-9	Sulfur monochloride
7646-85-7	Zinc chloride	10025-87-3	Phosphorus oxychloride
7647-01-0	Hydrogen chloride	10026-13-8	Phosphorus pentachloride
7664-38-2	Phosphoric acid	10028-15-6	Ozone
7664-39-3	Hydrogen fluoride	10035-10-6	Hydrogen bromide
7664-41-7	Ammonia	10049-04-4	Chlorine dioxide
7664-93-9	Sulfuric acid	10102-43-9	Nitrogen monoxide
7681-57-4	Sodium metabisulfite	10102-44-0	Nitrogen dioxide
7697-37-2	Nitric acid	10210-68-1	Cobalt tetracarbonyl
7719-09-7	Thionyl chloride	10294-33-4	Boron tribromide
7719-12-2	Phosphorus trichloride	11097-69-1	Chlorodiphenyl (54 % chlorine)
7722-84-1	Hydrogen peroxide	11103-86-9	Zinc chromate
7722-88-5	Tetrasodium pyrophosphate	12001-26-2	Mica
7723-14-0	Phosphorus (yellow)	12001-28-4	Asbestos Crocidolite
7726-95-6	Bromine	12001-29-5	Asbestos Chrysotile
7727-37-9	Nitrogen	12045-88-4	Sodium tetraborate, pentahydrate
7727-43-7	Barium sulfate	12079-65-1	Manganese cyclopentadienyl tricarbonyl
7758-97-6	Lead chromate	12108-13-3	Manganese methyl cyclopentadienyl tricarbonyl
7773-06-0	Ammonium sulfamate	12125-02-9	Ammonium chloride
7778-18-9	Calcium sulfate	12172-67-7	Asbestos Actinolite
7782-41-4	Fluorine	12172-73-5	Asbestos Amosite
7782-42-5	Graphite (natural)	12174-11-7	Fibres-Natural Mineral Fibres Attapulgit
7782-49-2	Selenium	12415-34-8	Emery
7782-50-5	Chlorine	12604-58-9	Ferrovanadium (dust)
7782-65-2	Germanium tetrahydride	13121-70-5	Cyhexatin
7783-06-4	Hydrogen sulfide	13397-24-5	Gypsum
7783-07-5	Hydrogen selenide	13463-39-3	Nickel carbonyl
7783-41-7	Oxygen difluoride	13463-40-6	Iron pentacarbonyl
7783-54-2	Nitrogen trifluoride	13463-67-7	Titanium dioxide
7783-60-0	Sulfur tetrafluoride	13494-80-9	Tellurium
7783-79-1	Selenium hexafluoride	13530-65-9	Zinc chromate
7783-80-4	Tellurium hexafluoride	13838-16-9	Enflurane
7784-42-1	Arsine	13983-17-0	Fibres-Natural Mineral Fibres Wollastonite
7786-34-7	Phosdrin	14378-12-2	Soapstone
7789-30-2	Bromine pentafluoride	14464-46-1	Silica — Crystalline, Cristobalite
7790-91-2	Chlorine trifluoride	14484-64-1	Ferbam
7803-51-2	Phosphine	14567-73-8	Asbestos Tremolite
7803-52-3	Stibine	14807-96-6	Talc, non fibrous
7803-62-5	Silicon tetrahydride	14808-60-7	Silica — Crystalline, Quartz
8001-35-2	Chlorinated camphene	14977-61-8	Chromyl chloride
8002-74-2	Paraffin wax		
8003-34-7	Pyrethrum		

15468-32-3	Silica — Crystalline, Tridymite	34590-94-8	Dipropylene glycol monomethyl ether
16219-75-3	Ethylidene norbornene	35400-43-2	Sulprofos
16752-77-5	Methomyl	37300-23-5	Zinc chromate
16842-03-8	Cobalt hydrocarbonyl	53469-21-9	Chlorodiphenyl (42 % chlorine)
17068-78-9	Asbestos Anthophyllite	53570-85-7	Coal dust (less than 5 % crystalline silica)
17702-41-9	Decaborane	55720-99-5	Chlorinated diphenyl oxide
17804-35-2	Benomyl	59355-75-8	Methyl acetylene-propadiene mixture (MAPP)
19287-45-7	Diborane	60676-86-0	Silica — Crystalline, fused
19624-22-7	Pentaborane	61788-32-7	Hydrogenated terphenyls
20816-12-0	Osmium tetroxide	61790-53-2	Silica — Amorphous, Diatomaceous earth (uncalcined)
21087-64-9	Metribuzin	63231-67-4	Silica — Amorphous, gel
21351-79-1	Cesium hydroxide	65996-93-2	Coal tar pitch volatiles, as benzene solubles
22224-92-6	Fenamiphos	65997-15-1	Portland cement
25013-15-4	Vinyl toluene	66733-21-9	Fibres-Natural Mineral Fibres Erionite
25154-54-4	Dinitrobenzene	68476-85-7	L.P.G. (Liquified petroleum gas)
25321-14-6	Dinitrotoluene	68956-68-3	Vegetable oil
25551-13-7	Trimethyl benzene	69012-64-2	Silica — Amorphous, fumes
25639-42-3	Methylcyclohexanol	74222-97-2	Sulfometuron methyl
26140-60-3	Terphenyls	83969-76-0	Perlite
26471-62-5	Toluene diisocyanate (TDI) (isomers mixture)	112926-00-8	Silica — Amorphous, gel
26499-65-0	Plaster of Paris		
26628-22-8	Sodium azide		
26952-21-6	Isooctyl alcohol		

SCHEDULE II

(s. 74)

LIST OF DANGEROUS SUBSTANCES BY CATEGORY

Categories of dangerous substances					
Dangerous substance	flammable and combustible	oxidant	toxic	corrosive	dangerous reactive
Acetates, organic	x				
Acids, mineral (concentrated)				x	
Acids, organic	x				
Air, compressed		x			
Alcohols	x				
Aldehydes	x				
Alkali metals	x				
Allyl compounds			x		
Amines	x				
Ammonia	x				
Ammonium dichromate	x				
Ammonium nitrate					x

Categories of dangerous substances

Dangerous substance	flammable and combustible	oxidant	toxic	corrosive	dangerous reactive
Ammonium persulphate					x
Anhydrides	x				
Antimony pentasulphide	x				
Arsenic compounds			x		
Bags and sacks having contained nitrates, sugar or oily materials	x				
Benzoates	x				
Bitumen	x				
Blasting powders					x
Bone oil	x				
Bromates		x			
Bromides (organic)	x		x		
Bromine		x			
Camphor			x		
Carbon black (lampblack)	x				
Carbonyl fluoride					x
Castor oil	x				
Charcoal, activated	x				
China wood oil (tung oil)	x				
Chlorates		x			
Chlorinated hydrocarbons			x		
Chlorine		x			
Chloroethane			x		
Chorites		x			
Coal tar	x				
Coconut oil, refined	x				
Cod liver oil	x				
Corn oil (Maize oil)	x				
Cottonseed oil	x				

Categories of dangerous substances

Dangerous substance	flammable and combustible	oxidant	toxic	corrosive	dangerous reactive
Cresols			x		
Cyanides			x		x
Cyanogen compounds			x		
Ethers	x		x		
Feed, various	x				
Fibres, vegetable (jute, kapok, sisal, etc)	x				
Fish scrap	x				
Fluorides, inorganic			x		
Fluorine		x			
Fluosulphonic acid			x		
Formaldehyde solution	x		x		
Fulminates					x
Fumigants, certain substances	x		x		
Hydrazine					x
Hydrocarbons	x				
Hydrides	x				
Hydrophosphites	x				
Hydroxylamine	x				
Insecticides (when dissolved in an inflammable or combustible liquid)	x		x		
Iodates		x			
Iron sponge	x				
Lanolin	x				
Lard oil	x				
Lead compounds			x		
Lead tetraethyl	x				
Linseed oil	x				
Lubricating oil	x				
Matches, strike-anywhere	x				

Categories of dangerous substances

Dangerous substance	flammable and combustible	oxidant	toxic	corrosive	dangerous reactive
Menhaden oil	x				
Mercury compounds			x		
Metal powders (finely divided)	x				
Methyl cyanoformate					x
Methyl fluoroformate				x	
Neatsfoot oil	x				
Nitrates, inorganic		x			
Nitrites, inorganic		x			
Nitrogen chloride	x				
Nitrogen dioxide				x	
Oiled clothing, fabrics, rags or silk	x				
Olive oil	x				
Organic chlorides	x		x		
Paint containing drying oils	x				
Paint scrapings	x				
Palm kernal oil	x				
Palm oil	x				
Paraffin oil	x				
Paraffin wax	x				
Peanut oil	x				
Perborates		x			
Perchlorates		x			
Perilla oil	x				
Permanganates		x			
Peroxides, inorganic		x			
Peroxides, organic	x	x			
Persulfates		x			
Phenol	x				
Phenolsulphonic acid			x		

Categories of dangerous substances

Dangerous substance	flammable and combustible	oxidant	toxic	corrosive	dangerous reactive
Phosphides	x				
Phosphorous pentachloride	x				
Picrates					x
Pine tar oil	x				
Potassium perchlorate					x
Rags, oily	x				
Resinates	x				
Rubber reclaimed	x				
Rubber scrap	x				
Rust preventing compounds				x	
Sawdust	x				
Seeds	x				
Selenium compounds			x		
Sodium amalgam	x				
Sodium azide	x				x
Sodium perchlorate					x
Soya bean oil	x				
Sperm oil	x				
Sugar beet (dry)	x				
Sulfides	x				
Tallow oil	x				
Tallow	x				
Whale oil	x				
Woodwool	x				
Wool wadding	x				

SCHEDULE III

(s. 106)

MINIMUM RATE OF AIR CHANGE PER HOUR

TABLE 1
AVERAGE GENERAL VENTILATION

Classification of establishments	Minimum rate of fresh air change per hour
Food and beverages	
Slaughterhouses and drysalting	2
Mineral oil and fats factories	3
Sausage and sausage casing manufacturing	2
Poultry processing	2
Milk concentrate manufacturing	2
Fish processing	2
Preparation and canning of fruit and vegetables	2
Biscuit manufacturing	2
Bakeries	2
Confectioneries	2
Vegetable oil mills	2
Distilleries	2
Breweries	2
Wine manufacturing	2
Tobacco products	
Leaf-tobacco processing	2
Tobacco products manufacturing	2
Rubber	
Rubber footwear manufacturing	3
Tire and tube manufacturing	3
Other rubber industries	3
Leather	
Tanneries	3
Shoe factories	2

Classification of establishments	Minimum rate of fresh air change per hour
Textiles	
Cotton yarn and cloth mills	2
Wool yarn mills	2
Wool cloth mills	2
Synthetic textile mills	2
Fiber preparation mills	5
Thread mills	5
Cordage and twine industry	5
Carpet, mat and rug industry	2
Textile dyeing and finishing	3
Linoleum and coated fabrics industry	4
Garages	
Garage for maintenance and repair	4
Garage for parking and storage	
— with permanent employees	3
— without permanent employees	2
Wood	
Shingle mills	2
Sawmills	2
Veneer and plywood mills	2
Sash, door and other millwood plants (excluding hardwood flooring)	2
Coffin and casket industry	2
Wood conversion industry	2
Furniture and fixtures	
Household furniture industry	2
Paper and related products	
Pulp and paper mills	2
Manufacturing of asphalt roofing paper	3
Paper box and bag manufacturing	2

Classification of establishments	Minimum rate of fresh air change per hour	Classification of establishments	Minimum rate of fresh air change per hour
Metal products		Chemicals	
Metal fabricating industries	4	Explosives and ammunition manufacturing	3
Miscellaneous machinery manufacturing	2	Mixed fertilizers manufacturing	2
Electrical appliance manufacturing	2	Plastics and synthetic resins industry	3
Cell and battery manufacturing	4	Pharmaceuticals and medical products	2
Non-metallic products		Paints and varnish industry	4
Cement industry	3	Maintenance products manufacturing	3
Lime industry	3	Industrial products manufacturing	2
Gypsum products manufacturing	3	Warehouses: See Table III of this Schedule,	
Concrete products manufacturing	2	Any other class of establishment not appearing in this Table or in Table II of this Schedule	1
Reinforced concrete industry	2	The number of air changes per hour listed in this Table may be converted into cfm/ft ² by using the following formula:	
Clay products manufacturing (domestic clay)	2	$\frac{\text{ft}^3/\text{min.}}{\text{ft}} = \frac{\text{Air change /hour}}{60 \text{ min./hour}} \times [12\text{ft} + \text{height of work level in feet (ref, main floor)}]$	
Refractory products manufacturing	4	or to m ³ /h/m ² by using the following formula:	
Stone products manufacturing	4	$\frac{\text{m}^3/\text{h}}{\text{m}^2} = \frac{\text{Air changes/hour}}{\text{in metres (ref, main floor)}} \times [3,6\text{m} + \text{height of work level in metres (ref, main floor)}]$	
Asbestos products manufacturing	6		
Glass and glass products manufacturing	4		
Abrasive industry	4		

TABLE 2
RATE OF AIR CHANGE PER HOUR FOR CERTAIN CLASSES OF ESTABLISHMENT

Classification of establishment	Total ventilation area		Fresh air	Relative pressure
	Unrefrigerated spaces (l/s/pers.)	Refrigerated spaces (l/s/pers.)	Refrigerated or unrefrigerated spaces (l/s/pers.)	
Commercial and industrial laundry	9,4	not applicable	2,4	negative pressure not exceeding 5 Pa
Office	7,1	45	2,4	not applicable
Laboratory	7,1	45	2,4	negative pressure not exceeding 5 Pa

Where gases, fumes, vapours, mists or dust are emitted in an establishment listed in this Table, the minimum rates of air change per hour must be increased so that the standards prescribed in Schedule 1 are complied with,

To compute the total ventilation air and the fresh air, the occupancy rate must be one person per 10 square metres for laundries and offices and one person per 5 square metres for laboratories,

TABLE III
VENTILATION IN WAREHOUSES WHERE
INTERNAL COMBUSTION VEHICLES
CIRCULATE

The ventilation rate per vehicle must be computed as follows:

$$Q = K \times (U/50 \%) \times (P/45\text{kW}) \times [2 - (V/4250\text{m}^3)]$$

where:

Q = air supply in m³/h prescribed per vehicle

K = ventilation constant, namely 8 500 m³/h per propane or diesel-powered vehicle, 13 500 m³/h per gas-powered vehicle

P = power of the engine in kilowatts

V = volume of space available in m³ per vehicle

U = percentage (%) of use of the vehicle during a work shift,

Notes:

1) if the percentage (U) of use of the vehicle or the power (P) of the engine is less than 50 % or 45 KW respectively, these factors must be omitted in the formula which then must read as follows:

$$Q = K \times [2 - (V/4250\text{m}^3)]$$

2) for the purposes of enforcing this Table, the volume of space available is equal to the total volume of the warehouse minus the volume occupied by the merchandise,

3) if the volume available exceeds 4 250 m³, the formula does not apply and the minimum air supply is 8 500 m³/h per propane or diesel-powered vehicle and 13 500 m³/h per gas-powered vehicle,

SCHEDULE IV

(s. 127)

STANDARDS OF TEMPERATURE IN
ESTABLISHMENTS

Nature of work performed	Minimum temperature required
light work performed while sitting: any mental work, precision work, reading or writing	20 °C
light physical work performed while sitting: electric machine sewing and work with small machine tools	19 °C
light work performed while standing: machine tool work	17 °C
moderate work performed while standing: assembly and trimming	16 °C
heavy work performed while standing: drilling and manual work with heavy tools	12 °C

SCHEDULE V

(s. 131, 132, 133 et 134)

EVALUATION OF HEAT STRESS

Wet Bulb-Globe Temperature Index (WBGT) is computed by using the following equations:

(a) outdoors with solar load:
WBGT = 0,7 WB + 0,2 GT + 0,1 DB

(b) indoors or outdoors with no solar load:
WBGT = 0,7 WB + 0,3 GT

where:

WB = natural wet-bulb temperature

DB = dry-bulb temperature

GT = globe thermometer temperature

To determine WBGT, the instruments required are a black globe thermometer, a natural (static) wet-bulb thermometer and a dry-bulb thermometer,

Heat exposures higher than those shown in Table I are permissible on the following conditions: the worker must be under medical supervision and it must be proven that his tolerance for working in heat is greater than that of the average worker,

TABLE I
PERMISSIBLE HEAT EXPOSURE LIMIT VALUES,
IN °C (WBGT)

Alternate work/ rest regimen	Work load		
	light work	moderate work	heavy work
Continuous work	30,0	26,7	25,0
Work 75 %, rest 25 % (each hour)	30,6	28,0	25,9
Work 50 %, rest 50 % (each hour)	31,4	29,4	27,9
Work 25 %, rest 75 % (each hour)	32,2	31,1	30,0

Graph (R.R.Q., 1981, p. 9-652)

Method of measurement

WBGT values are measured as follows:

1) The range of the dry and the natural wet bulb thermometer must be between -50 °C and +50 °C, with an accuracy of $\pm 0,5$ °C. The dry bulb thermometer must be shielded from the sun and other radiant surfaces without restricting the airflow around the bulb. The wick of the natural wet bulb thermometer must be kept wet with distilled water for at least 30 minutes before the temperature reading is made. It is not enough to immerse an end of the wick into a reservoir of distilled water and wait until the wick becomes wet by capillarity; the wick must be wetted by direct application of water from a syringe one-half hour before each reading. The wick must extend over the bulb of the thermometer, covering the stem about one additional bulb length. The wick should always be clean and new wicks should be washed before being used,

2) A globe thermometer, consisting of a 15-centimetre diameter hollow copper sphere painted on the outside with a matte black finish or equivalent, must be used. The bulb or sensor of the thermometer (range: -5 °C à +100 °C with an accuracy of $\pm 0,5$ °C) must be fixed in the centre of the sphere. The globe thermometer must be exposed at least 25 minutes before it is read,

3) A stand must be used to suspend the 3 thermometers so that they do not restrict free air flow around the bulbs, and so that there is no obstacle between the heat sources and the wet bulb globe thermometer,

4) Any other type of temperature sensor may be used that gives a reading identical to that of a mercury thermometer under the same conditions,

5) The thermometers must be placed so that the readings are representative of the conditions in which the men work or rest, respectively,

Work load

The total heat load is the sum of the heat produced by the body and the environmental heat. Therefore, if the work is performed under hot environmental conditions, the workload category of each job must be established and the permissible heat exposure limit value pertinent to the work load evaluated against the applicable standard in order to protect the worker from exposure beyond the permissible limit,

The jobs performed by a worker must be classed in the following categories:

(a) light work: up to 200 kcal/h (sitting or standing to control machines; performing light hand or arm work, etc.);

(b) moderate work: from 200 to 350 kcal/h (walking about with moderate lifting and pushing, etc.);

(c) heavy work: from 350 to 500 kcal/h (pick and shovel work, etc.)

Table I thus gives the permissible heat exposure limit value for the specified work load,

An activity may be classed in a particular category by measuring the metabolism of the man at work or by estimating his metabolism using the following Table II:

TABLE 2

ASSESSMENT OF WORK LOAD
AVERAGE VALUES OF METABOLIC RATE DURING DIFFERENT ACTIVITIES

A. Body position and movement	kcal/h	
Sitting	18	
Standing	36	
Walking	120-180	
Walking uphill	Add 48 per metre rise	
B. Type of work	Average (kcal/h)	Range (kcal/h)
Handwork	12-72
light	24	
heavy	54	
Work using one arm	42-150
light	60	
heavy	108	
Work using both arms	60-210
light	90	
heavy	150	
Work using body	150-900
light	210	
moderate	300	
heavy	420	
very heavy	540	
Light handwork		writing, knitting
Heavy handwork		typing
Heavy work using one arm		hammering in nails (shoemaker, upholsterer)
Light work using 2 arms		filing metal, planning wood, raking agarden
Moderate work using 2 arms		cleaning a floor, beating a carpet
Heavy work using the body		railroad track laying, digging, barking trees
C. Basal metabolism: 60 kcal/h		
Basal metabolism: minimum quantity of calorific energy used when the body is at complete rest,		
Sample calculation: use of a heavy hand tool on an assembly line		
A. Walking along	120 kcal/h	
B. Intermediate value between heavy work using 2 arms and light work using the body	180 kcal/h	
	300 kcal/h	
C. Basal metabolism	60 kcal/h	
Total	360 kcal/h	

The tables in the following publications may also be used:

(a) Astrand P.O., Rodahl K., Textbook of Work Physiology, New York, San Francisco, McGraw Hill Book Company, 1979;

(b) Ergonomics Guide to Assessment of Metabolic and Cardiac Cost of Physical Work, Amer, Id, Hyg, Assoc, J., 32;

(c) Energy Requirements for Physical Work, Research Progress Report No 30, Purdue Farm Cardiac Project, Agricultural Experiment Station, 1961;

(d) Durnin, J.V.G.A., Passmore R., Energy, Work and Leisure, London, Heinemann Educational Books, 1967,

Alternate work/rest regimen

The permissible exposure limit values specified in Table I and the Graph are based on the assumption that the WBGT value of the resting place is the same or very close to that of the work location, The permissible exposure limit values for continuous work are applicable where there is a 5-day work week and an 8-hour work day with a short break (approximately half an hour) for meals, Higher exposure limits are permitted if additional rest periods are allowed, All breaks, including pauses and administrative or operational waiting periods during work may be counted as rest time when additional rest periods must be given because of high environmental temperatures,

A worker whose job is self-paced will spontaneously limit his hourly work load to 30-35 % of his maximum physical performance capacity, either by setting an appropriate work speed or by interspersing unscheduled breaks, Thus the daily average of the worker's metabolic rate seldom exceeds 330 kcal/h, However, within an 8-hour work shift, there may be periods when the worker's average metabolic rate will be higher,

When the WBGT index of the work location is different from that of the rest area, a time-weighted average value should be used for both environmental heat and metabolic rate, When the time-weighted average values are used, the curve to be referred to in the above graph is the solid line,

The time-rated average metabolic rate is determined by the following equation:

$$M_{\text{average}} = \frac{(M_1) \times (t_1) + (M_2) \times (t_2) + \dots (M_n) \times (t_n)}{(t_1) + (t_2) + \dots (t_n)}$$

where M_1 , M_2 and M_n are estimated metabolic rates for each of the worker's work locations for the whole work period, and t_1 , t_2 and t_n are the time in minutes spent at each corresponding metabolic rate,

Similarly, the time-weighted average WBGT is determined by the equation:

$$WBGT_{\text{average}} = \frac{(WBGT_1) \times (t_1) + (WBGT_2) \times (t_2) + \dots (WBGT_n) \times (t_n)}{(t_1) + (t_2) + \dots (t_n)}$$

where $WBGT_1$, $WBGT_2$ and $WBGT_n$ are calculated values of WBGT for various jobs performed at rest areas and work locations occupied during total time periods and t_1 , t_2 , t_n are the times in minutes spent in the work locations and in each rest area,

When exposure to hot environmental conditions is continuous for several hours or the entire work day, the time-weighted average value must be computed as an hourly time-weighted average, i.e, $t_1 + t_2 + \dots, t_n = 60$ minutes, Where exposure is intermittent, the time-weighted average values must be computed as two-hour time-weighted averages, i.e, $t_1 + t_2 + \dots, t_n = 120$ minutes,

Scope of method

The WBGT method does not apply to unacclimatized workers who are physically incapable of performing a specific job or to workers who wear clothing especially adapted to certain dangerous tasks as protection against the heat,

SCHEDULE VI

(s. 135)

ILLUMINATION LEVELS IN ESTABLISHMENTS

Nature of work	Examples of corresponding task	Minimum illumination level Lux
Storage, reserve	Warehouses, stockrooms, supervision	50
General perception	Dormitories, grinding	250
Rough detail perception	Freight and passenger elevators, escalators	50
	General lighting, lecture rooms, moulding, manufacturing large parts	250
Average detail perception	Ironing, window dressing, packing, labeling, heavy machine or bench work, general office work	400
	Quick general inspection, studios, study areas, typing, reading, machine sewing, assembly of average parts, special office work	550
Difficult detail perception	Repairs, difficult inspection, lathe, hand sewing, embroidery	800

SCHEDULE VII

(s. 144)

METHOD OF MEASURING PREDOMINANT FREQUENCY BANDS (in corrected dBA)

(a) Using the analysis of each octave band from 31,5 Hz to 16 KHz, determine if one of the bands corresponds to the notion of predominant frequency band;

(b) add 5 dB to the measured level of each band corresponding to the notion of predominant frequency band;

(c) modify the resulting sound spectrum as follows:

— at the level of 31,5 Hz, deduct 39,4 dB

— at the level of 63 Hz, deduct 26,2 dB

— at the level of 125 Hz, deduct 16,1 dB

— at the level of 250 Hz, deduct 8,6 dB

— at the level of 500 Hz, deduct 3,2 dB

— at the level of 1 000 Hz, no modification

— at the level of 2 000 Hz, add 1,2 dB

— at the level of 4 000 Hz, add 1,0 dB

— at the level of 8 000 Hz, deduct 1,1 dB

— at the level of 16 000 Hz, deduct 6,6 dB;

(d) then add the levels of each octave of the spectrum thus modified by following the method for adding decibels;

(e) the result thus obtained is expressed in corrected dBA,

SCHEDULE VIII

(s. 158)

DAILY QUANTITY OF DRINKING WATER REQUIRED BY WORKERS

Destination	Characteristic	Daily quantity by worker (litres/jour)
Offices		55
Camps	Permanent	190
	Temporary	95
Schools		55
Manufacture	Without shower	55
	With shower	130
Plant or factory	Without shower	55
	With shower	130

SCHEDULE IX
(s. 173)

SANITARY FACILITIES

Occupancy	W.C.		Urinals	Lavatories		Drinking fountains	Bathubs or showers	Other fixtures	Notes
	men	women		men	women				
Arenas									
Players	1/30 players	1/30 players	1/30 players	1/30 players	1/60 players	1/10 players			
Spectators	1/600 men	3/600 women	2/600 men	2/600 women	1/600 spectators				
Building under construction									(a) Over 210 employees, sanitary facilities shall be determined by the inspection service
1 to 210 employees	1/30 employees								(b) Sinks are compulsory if employees have to handle corrosive, noxious or irritating substances.
211 employees or more	See (a)			See (b)					(c) 2/3 of men W.C. may be replaced by urinals.
Brasseries	1/40 Customers	1/90 Customers	See (c)	1/80 Customers	1/80 Customers				(d) A sink shall be installed in the examination room in addition to the one in the toilet room
Physicians, dentists and other health practitioners offices	1			2					(e) For men, half the compulsory W. C. may be replaced by urinals.
Cinemas, theatres, auditoriums, exhibition and convention halls									(f) Sanitary accommodations for employees shall be the same as those required for office buildings
1 to 100 persons	1	1		1	1			one service sink	
101 to 200 persons	2	2		1	1				
201 to 400 persons	3	3	See (e)	2	2	1			
401 to 750 persons	add	add		3	3	2			(See ***)
751 or more	1/600 persons	1/600 persons		add	add	add			
Employees: See (f)				1/1000 persons	1/1000 persons	1/1000 persons			
Medical clinics	1/floor	1/floor		1/floor	1/floor	1/floor			

Occupancy	W.C.		Urinals	Lavatories		Drinking fountains	Bathubs or showers	Other fixtures	Notes
	men	women		men	women				
Bars (holding a permit from the Québec Régie des permis d'alcool)									
Customers:	1/25 men	1/50 women	See (e)	1/50 men	1/60 women				(g) In a women's dormitory, a bathub shall be added in a proportion of 1/30. (h) At least one per floor. (i) In the gymnasium and according to the largest group that uses it. (j) Only one toilet room is required for 10 employees or less of both sexes. (k) A drinking fountain is not required for less than 5 employees.
Employees: See (f)									
Dormitories, boarding houses for children									
1 to 150 persons	1/10 men add	1/8 women add	1/25 men add	1/12 men add	1/12 women add	1/75 persons add	See (g) 1/8 persons add	One laundry tray per 50 persons One service sink or tub per 100 persons (See ***)	
151 persons or more	1/10 men	1/8 women	1/50 men	1/12 men	1/12 women	1/75 persons	1/20 persons		
Schools									
(a) Primary	1/40 boys	1/35 girls	1/30 boys	1/50 boys	1/50 girls	See (h)	See (i)	One service sink 1/floor 1/floor (See ***)	
(b) Others	1/75 boys	1/75 girls	1/30 boys	1/50 boys	1/50 girls	1/100 pupils 1/100 pupils	1/5 pupils 1/5 pupils		
(c) Teachers: See (f)									
Office buildings									
(See j)						See (k)			
1 to 15 employees of each sex	1	1		1	1	1/75 employees		One service sink per floor	
16 to 35 employees of each sex	2	2	See (e)	2	2				
36 to 60 employees of each sex	3	3		2	2				
61 to 80 employees of each sex	4	4		3	3				
81 to 90 employees of each sex	5	5		3	3				
91-110 employees of each sex	5	5		4	4				
111-125 employees of each sex	6	6		4	4				
126 and more employees of each sex	add	add		add	add				
	1/50 men	1/50 women		1/60 men	1/60 women			(See ***)	

Occupancy	W.C.		Urinals		Lavatories		Drinking fountains	Bathubs or showers	Other fixtures	Notes
	men	women	men	women	men	women				
Churches, chapels, places of worship	1/300 men	1/150 women	1/300 men	1/300 women	1/300 men	1/300 women				(l) One W.C. and a lavatory shall be installed, except if written permission is given to use an existing washroom located within a maximum of 30 metres. (m) Toilet facilities for general use shall be separate from bathrooms and lavatories. (n) One lavatory is required for each room not equipped with a private toilet. (o) One shower for each similar massage, physiotherapy or health treatment unit. (p) One laundry tray per apartment or one connexion for an automatic clothes washer. (q) One double basin laundry tray per 10 apartments or one automatic clothes washer per 20 apartments.
Cabins, shelters, temporary buildings, See (l)	1			1						
Hospitals (hospital centres)									At least one service sink per floor for the first 50 patients and an additional one per each 50 additional patients or significant fraction of 50. (See ***)	
1) Private room	1			1			1	1		
2) Communal room	1/8 patients			1/8 patients			1/100 patients	1/20 patients		
3) Waiting room	1			1						
4) Employees: See (f)										
Hotel - Motel	See (m)				See (n)					
1) Private room	1/room			1/room				1/room		
2) Room with common bathroom										
1 to 4 rooms/floor	1/floor			1/floor				1/floor		
5 to 8 rooms/floor	1/floor			1/floor				1/sex add		
9 rooms or more/floor	1/floor add	1/floor add		1/floor add	1/floor add		1/8 rooms	1/8 rooms		
Personal and professional care institutes, hairdressing salons and barber shops	1	1	1	1	1	1/care unit		1 shower		See (o)

Occupancy	W.C.		Urinals	Lavatories		Drinking fountains	Bathtubs or showers	Other fixtures	Notes
	men	women		men	women				
Apartments 1 to 7 units	1/apartment			1/apartment			1 bathtub per apartment	1 sink per apartment See (p)	(r) Several stores may use a common wash-room provided it is accessible via an indoor passageway.
8 units or more	1/apartment			1/apartment			1 bathtub per apartment See (q)	1 sink per apartment See (p)	(s) A tub or sink shall be installed in a food store. In dog kennels and pet shops, a tub or a service sink and a floor drain shall be installed.
Stores a) Retail (See r) b) Department, Shopping Centres	1			1				See (s)	(t) Fixtures for employees may be situated in the customers' washrooms. (u) In homes for senior citizens, bathtubs shall be installed in a proportion of one for every 10 persons.
1) Customers	1/300 men	1/300 women	See (e)	1/300 men	1/300 women	1/300 Customers		See (s)	(v) The maximum number of swimmers is determined in a proportion of one swimmer per every 1.4 sq. surface metres in the shallow zone and 2.2 sq. surface metres in the deep zone.
2) Employees: See (f) (t)									
Rooming House (tourist, furnished, boarding homes)	See (m) 1/10 rooms	1/10 rooms		See (n) 1/10 rooms	1/10 rooms		See (u) 2/10 rooms		Facilities shall be arranged so that swimmers may go through the toilet area to get to the showers.
Pools								See (v)	
1) Indoors	1/60 men	1/40 women	1/60 men	1/100 men	1/100 women	1/100 swimmers	1/40 swimmers		
2) Outdoors	1/120 men	1/80 women	1/120 men	1/300 men	1/300 women	1/100 swimmers	1/80 swimmers	1 Foot Bath	
3) Spectators	1/600 men	3/600 women	2/600 men	2/600 men	2/600 women	1/100 spectators			

Occupancy	W.C.		Urinals	Lavatories		Drinking fountains	Bathtubs or showers	Other fixtures	Notes
	men	women		men	women				
Jails, prisons 1) Inmates: See (w) 2) Employees: See (f)									(w) In accordance with provincial or federal authorities' requirements. (x) Under 26 customers, 1 W.C. and 1 lavatory will be enough for both customer and employee use. From 26 to 50 customers, 2 W.C. and 2 lavatories will be enough for both customers and employees, but in two separate washrooms. Where customers eat outside, separate washrooms for both sexes with access from the outside shall be required. (y) Toilet facilities for under 5 employees are not required.
Restaurants									
1 to 25 Customers	1	See (x)		1	See (x)				
26 to 50 Customers	1	See (x)		1	See (x)				
51 to 100 Customers	1	2		1	1				
101 to 150 Customers	1	1		1	2				
151 to 200 Customers	2	3	See (e)	2	2				
201 to 300 Customers	3	3		3	3				
301 or more	add	add		add	add				
	1/50	1/50		1/50	1/50				
	men	women		men	women				
Employees: See (f) and (y)									
Reception rooms, meeting rooms... (holding a permit from the Régie des permis d'alcools du Québec)								See (***)	
Customers	1/30	1/30		1/60	1/60	1/100		A tub or a service sink	
	men	women		men	women	Customers			
Funeral Homes	1	1		1	1	1		A service sink and a floor drain in the embalming room. See (***)	

Occupancy	W.C.		Urinals		Lavatories		Drinking fountains	Bathtubs or showers	Other fixtures	Notes
	men	women	men	women	men	women				
Service stations, gas bars, (See z)	1	1	1	1						(z) Separate rooms for both sexes with access to the outside is compulsory. (aa) A shower is compulsory per 15 employees exposed to excessive heat or to skin contact with corrosive, noxious, irritating or infectious *** The service sink may have a 5 cm diameter trap if the floor is covered with a carpet.
Plants, factories, warehouses, foundries, workshops, food processing, laundries (See j)							See (h) and (k)	See (aa)		
1 to 10 employees of each sex	1	1			1	1				
11 to 25 employees of each sex	2	2		1	add 1/10 men	add 1/10 women				
26 to 50 employees of each sex	3	3		2			1 unit per 75 employees			
51 to 75 employees of each sex	4	4		2						
76 to 100 employees of each sex	5	5		3						
101 or more employees of each sex	add 1/50 men	add 1/50 women	add 1/90 men	add 1/90 men	add 1/15 men	add 1/15 women				