WHEREAS, the Government, by Order in Council 660-83 dated 30 March 1983, made the Regulation respecting securities;

WHEREAS, the Commission des valeurs mobilières du Québec made, on 2 March 2001, the Regulation to amend the Regulation respecting securities to abolish fees for securities transactions;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1), a draft of the Regulation was published in *the Gazette officielle du Québec* of 4 April 2001 with a notice that it could be submitted to the Government for approval upon the expiry of 45 days following that publication;

WHEREAS it is expedient to approve the Regulation;

IT IS ORDERED, therefore, upon the recommendation of the Minister of Finance:

THAT the Regulation to amend the Regulation respecting securities, attached to this Order in Council, be approved.

JEAN ST-GELAIS,
Clerk of the Conseil exécutif

Regulation to amend the Regulation respecting securities*

Securities Act
(R.S.Q., c. V-1.1, s. 331.1(2))

1. Sections 271.7 to 271.10 of the Regulation respecting securities are revoked.

2. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

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* The Regulation respecting securities, made by Order in Council 660-83 dated 30 March 1983 (1983, *G.O.*2, 1269) was last amended by the Regulation made by Order in Council 627-2000 dated 24 May 2000 (2000, *G.O.*2, 2531). For previous amendments, refer to the *Tableau des modifications et Index sommaire*, Éditeur officiel du Québec, 2000, updated 1 November 2000.

Gouvernement du Québec

O.C. 885-2001, 4 July 2001

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

Occupational health and safety

Regulation respecting occupational health and safety

WHEREAS under subparagraphs 1, 3, 4, 7 to 16, 18 to 21.1, 41 and 42 of the first paragraph of section 223 of the Act respecting occupational health and safety (R.S.Q., c. S-2.1), the Commission de la santé et de la sécurité du travail may make regulations on the matters mentioned therein;

WHEREAS under the second paragraph of section 223 of the Act, the content of the regulations may vary according to the categories of persons, workers, employers, workplaces, establishments or construction sites to which they apply and the regulations may also provide times within which they are to be applied, and these times may vary according to the object and scope of each regulation;

WHEREAS under the third paragraph of section 223 of the Act, a regulation may refer to an approval, certification or homologation of the Bureau de normalisation du Québec or of another standardizing body;

WHEREAS in accordance with section 224 of the Act and sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1), a draft of the Regulation attached to this Order in Council was published in Part 2 of the *Gazette officielle du Québec* of 16 September 1998, with a notice that, upon the expiry of 90 days following that notice, it would be made by the Commission with or without amendment and submitted to the Government for approval;

WHEREAS the Commission made the Regulation respecting occupational health and safety, with amendments, at its sitting of 15 February 2001;

WHEREAS it is expedient to approve the Regulation;

IT IS ORDERED, therefore, upon the recommendation of the Minister of State for Labour, Employment and Social Solidarity and Minister of Labour:

THAT the Regulation respecting occupational health and safety, attached to this Order in Council, be approved.

JEAN ST-GELAIS,
Clerk of the Conseil exécutif

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REGULATION RESPECTING OCCUPATIONAL HEALTH AND SAFETY

Section

Regulation respecting occupational health and safety

An Act respecting occupational health and safety (R.S.Q., c. S-2.1, s. 223. 1st par. subpar. (1), (3), (4), (7) to (16), (18) to (21.1), (41) and (42), 2nd par. and 3rd par.)

DIVISION I
INTERPRETATION AND SCOPE

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

"ACNOR": The Canadian Standards Association or the Association canadienne de normalisation;

"aerial basket 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 by means of a basket on work sites;

"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 public thoroughfares and whose net weight does not exceed 450 kilograms;

"ANSI": The American National Standards Institute;

"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 Engineers;

"CGA": The Canadian Gas Association or the Association canadienne du gaz;

"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 or the Association canadienne de normalisation;

"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;

"EN": a European standard issued by the European Committee for Standardisation;

"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 including a ditch and a temporary manure storage ditch, a pipe, a chimney, an access shaft, a truck or freight car tank, which has the following inherent conditions:

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

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

(3) which can represent a risk for the health and safety of anyone who enters, owing to any one of the following factors:

(a) its design, construction or location, except for the entrance/exit provided for in subsection (2);

(b) its atmosphere or insufficiency of natural or mechanical ventilation;

(c) the materials or substances that it contains;

(d) or other related hazards;

"friable material": material that can be crumbled, pulverized or powdered by hand pressure when dry or that is crumbled, pulverized or powdered;

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

"high-efficiency filter": any filter capable of filtering particles 0,3 micrometres (μm) in size at an efficiency rate of at least 99,97%;

"hoisting apparatus": includes cranes, travelling cranes, gantries, winches, blocks, lift trucks, aerial basket lifting devices, 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 less than or equal to one per second;

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

"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 device": set of devices which when used alone or with a protector on machinery, eliminates dangers or reduces risks for the health, safety and physical well-being of workers;

"rated load": the maximum load set by the manufacturer or an engineer;

"respirable asbestos fibre": asbestos fibre having a diameter of less than 3 micrometres (μm) and a ratio of length to diameter of more than 3:1. Only fibres longer than 5 micrometres (μm) are taken into account for measurement purposes;

"respiratory zone": the zone within 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;

"SAE": The Society of Automotive Engineers;

"safety factor": the ratio between the rupture load and the working load;

"self-propelled vehicle": a motor vehicle mounted on wheels, on tracks or on rails, used for the transportation of objects or materials, or for towing or pushing trailers or materials, with the exception of an all-terrain vehicle or an elevating or lifting device;

"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, sinks or showers to meet the sanitary needs of the workers of an establishment;

"work station": any place, including a vehicle occupied by a worker to perform his work;

"ULC": Underwriters' Laboratories of Canada or the Laboratoires des assureurs du Canada.

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

Sections 1 to 5, 17, 40, 44 to 48, 61, 64 and 65, subparagraphs 1) to 3) of the first paragraph and the second paragraph of section 66, sections 107 to 111, 113 to 115, 121 to 124, the first paragraph of section 145 and sections 146, 148 to 151 and 162 to 165 also apply with appropriate changes to construction sites or, if applicable, to categories of sites specified therein.

DIVISION II
GENERAL PROVISIONS

3. **Purpose**: The purpose of this Regulation is to establish standards pertaining in particular 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 the health of workers and to ensure their safety and physical well-being.

4. **Employer's obligations**: The employer shall comply with the standards set hereunder, with the exception of those of section 339.

5. **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, venti-

lation, 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
ESTABLISHMENT CONDITIONS

6. **Access routes and passageways**: Access routes providing access to buildings and reserved pedestrian passages shall be:

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

(2) maintained to keep the surface from becoming slippery;

(3) protected from falling objects or materials;

(4) properly lit.

7. **Passageway markings**: In yards, passages and walkways reserved for pedestrians, and if applicable, their intersections with vehicle roadways, shall be clearly marked with signs in full view.

8. **Yards**: Yards or parts of yards used for the handling and transportation of supplies shall be kept level and drained so as to ensure safe usage, particularly in preventing the destabilization of loads, vehicles and equipment.

9. **Horizontal openings**: Excavations, wells or basins presenting a falling hazard shall be solidly covered or protected with guardrails 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 or fish-breeding purposes.

10. **Vertical openings**: Any opening made through a wall that presents a falling hazard for a worker or for any object shall be protected with a guardrail or a protective screen.

11. **Exceptions**: Sections 9 and 10 do not apply when the use of a cover, guardrail or protective screen prevents the carrying out of a task that could not be reasonably performed otherwise.

In such a case, the cover, guardrail or protective screen may be removed, but only while the work is being performed. The wearing of a safety harness is then compulsory for any worker exposed to a danger of falling in the opening, except if the worker is protected by some other device that provides him with equivalent safety or by a safety net.

12. **Guardrails**: Any guardrail incorporated in a building, with the exception of a guardrail that is part of any equipment, shall comply with the National Building Code as applied at the time of its installation.

Other guardrails shall be so designed, constructed and installed as to withstand the following minimum loads:

(1) a 0,55 kilonewton horizontal single point load applied at any location on the top rail;

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

In addition, such guardrails shall be provided with a top rail located between 900 millimetres and 1 100 millimetres from the floor and at least an intermediate rail fixed at midway between the top rail and the floor.

The intermediate rail may be replaced by balusters or panels.

13. **Toeboard**: If there is danger from failing objects capable of causing injuries, the guardrails shall be fitted with a minimum 100 millimetre high toeboard at floor level.

14. **Floor**: Any floors shall be:

(1) kept in good order, clean and free from any obstruction;

(2) provided with walkways that comply with section 15;

(3) provided with drains, if required for maintenance and the draining off of liquids;

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

15. **Walkways**: Walkways inside a building shall:

(1) be kept in good order and free from any obstruction;

(2) be maintained to keep the surface free becoming slippery, even through wear or humidity;

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

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

(5) be clearly marked out by lines traced on the floor or be bordered by facilities, equipment, walls or material or merchandise depots, to permit the safe passage of persons;

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

(7) be equipped with a guardrail wherever there is a falling hazard.

16. **Work stations**: A work station shall

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

(2) be situated on a surface that is maintained so as not to become slippery, even through wear or humidity;

(3) have sufficient free space between machines, facilities or material depots in order that workers may carry out their task safely; this free space shall not be less than 600 millimetres.

Subparagraph 3) of the first paragraph does not apply to a work station in a vehicle.

17. **Cleaning**: Subject to section 326, the upkeep of the work premises of an establishment shall be ensured through vacuuming, wet mopping or any other method that controls and reduces to a maximum the stirring up of dust.

18. **Refuse containers**: Refuse, sweepings and other residues shall be removed from work stations.

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

19. **Location of machines**: Machines shall be located in such manner as to provide necessary free space for their upkeep and the safe handling of material and refuse.

20. **Machine guidance tracks**: Machine guidance tracks such as those of conveyors, gantries or machines used for transporting persons or things, can only be crossed in the following cases:

(1) at places protected and so designated;

(2) according to a procedure ensuring worker safety;

(3) at any place where they can be crossed safely, in the case of a slow-moving conveyor.

21. **Work station access**: Machines, machine rooms or service platforms for these machines, which constitute a work station, shall, if they are situated above or below a floor and if they are not serviced by a stairway, be accessible by a service stairway, an access ramp or a fixed ladder.

However, access to such a place by means of a fixed ladder is prohibited when a worker cannot use both hands for holding onto the side rails or rungs of the permanent ladder.

This section does not apply to a vehicle.

22. **Service stairs**: Any service stairs shall:

(1) have a minimum width of 550 millimetres for stairways built or modified starting on the date this regulation comes into force;

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

(3) be provided with guardrails along any free side;

(4) be provided with steps having:

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

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

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

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

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

Subparagraph 5) of the first paragraph only applies to stairs 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. Stairs that do not have to comply with subparagraph 5) shall have an adequate warning sign.

23. **Permanent ladders**: Permanent ladders used to replace service stairs shall:

(1) 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;

(2) for ladders exceeding 9 metres, have rest platforms equipped with guardrails, at least at 6-metre intervals;

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

(4) 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;

(5) extend 900 millimetres beyond the top storey;

(6) be provided with guardrails surrounding the floor opening with a removable gate for access to the ladder;

(7) be provided with crinolines or cages or a fall arrestor in compliance with the standard Fall arresters, vertical lifelines and rails CAN/CSA Z259.2.1-98, where there is danger of a fall greater than 6 metres.

Subparagraphs 3) and 4) of the first paragraph only applies to permanent ladders built, installed or modified starting on the date of the coming into force of this regulation.

24. **Exception**: Notwithstanding subparagraph 2) of section 23, the permanent ladders servicing elevated towers, water reservoirs or other elevated constructions to which workers only occasionally have access, may be exempt from rest platforms.

25. **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.

However, portable ladders and stepladders in use when the regulation enters into force may also be used if they are in good condition and if they comply with the ACNOR Z11-1969 Portable Ladders standard.

This section does not apply to three-rail orchard ladders.

26. **Operating conditions**: Portable ladders shall:

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

(2) be firmly held in place by one or more persons, if they are not firmly attached and if their length is equal to or more than 9 metres;

(3) be protected against any sliding and against any shock that could compromise equilibrium;

(4) 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;

(5) where used as a means of access:

(a) be firmly fixed in place;

(b) extend 900 millimetres beyond the top storey;

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

(6) be set in such a manner that there is sufficient space at the base allowing safe access;

(7) never be used as a horizontal prop;

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

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

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

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

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

28. **A stepladder**: Any stepladder used on a work site shall:

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

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

29. **Prohibited usage**: The top and the pail shelf of a stepladder shall never be used as a step.

30. **Safety precaution**: The worker shall always be turned facing the ladder or stepladder while climbing or descending.

31. **Gangways and stationary platforms**: Gangways and stationary platforms shall:

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

(2) be provided with guardrails complying with sections 12 and 13 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;

(3) if made of perforated materials and located more than 1,8 metres from the floor or the ground, not include openings through which a sphere 30 millimetres in diameter can pass;

(4) have a minimum width of 600 millimetres for gangways or platforms built or modified starting on the date this regulation comes into force;

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

32. **Installation of scaffolds**: Scaffolds or devices designed and built for lifting persons shall be used in places where workers, from the ground or a solid structure, are unable to perform their work.

However, the use of a ladder or stepladder is permitted for work of short duration.

33. **Operating conditions**: Scaffolds shall be designed for the type of work to be performed and the probable risks. They shall meet the following conditions:

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

(2) have a safety factor of at least 4 for each constituent element;

(3) rest on firm ground or foundations;

(4) be provided with guardrails when workers are exposed to a danger of falling more than 3 metres.

The guardrails of the scaffolds may be temporarily removed if they prevent the carrying out of work that cannot reasonably be performed otherwise. In these cases, the wearing of a safety harness is compulsory for the worker and the worksite shall be marked off to prevent access to those persons not working there.

DIVISION IV
EMERGENCY SAFETY PRECAUTIONS

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

35. **Drills**: Rescue and evacuation drills shall be held at least once a year. These drills are to be adapted to risks found in the establishment as well as to the nature of activities carried on there.

36. **Portable fire extinguishers**: portable fire extinguishers shall be installed in all buildings so that action may be taken in the early stages of a fire.

The choice, installation, utilization 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.

Additional fire extinguishers shall be installed in places where there is a localized risk of fire.

37. **Operating conditions**: Portable fire extinguishers shall:

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

(2) provide protection according to the nature of the present hazard;

(3) be filled after use;

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

38. **Emergency systems**: Alarm and detection systems as well as emergency lighting shall always be in good working order.

DIVISION V
AIR QUALITY

39. **Replacement**: Insofar as possible, dangerous substances that are sources of dusts, fumes, mists, vapours or gases shall be replaced with substances that are not dangerous or are the least dangerous possible.

40. **Oxygen**: Subject to section 45, the percentage in volume of airborne oxygen in any work location of an establishment shall not be less than 19,5% at normal atmospheric pressure.

41. **Standards**: Subject to section 45, 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 respiratory zone of the workers, the standards provided for in Schedule I for any time period specified therein.

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

Such an establishment shall be designed, constructed, fitted or provided with an evacuation system for gases, dusts, fumes, vapours or mists to comply with the standards provided for in the first paragraph.

The first paragraph also applies to any work station located in a vehicle, wherever situated.

42. **Carcinogenic and isocyanate substances**: When a worker is exposed to a substance identified in Schedule I as having a known or suspected carcinogenic effect on humans or being diisocyanate or isocyanate oligomers, such exposure shall be reduced to a minimum, even when it remains within the standards provided under this schedule.

43. **Measurement**: In any establishment that employs 50 workers or more where the concentration of gases, dusts, fumes, vapours or mists at a work location exceeds or could exceed the standards prescribed in Schedule I, 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 44.

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

These measurements shall also be taken 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 a period of at least 5 years.

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

These dusts, gases, fumes, vapours and mists found in the workplace environment shall be sampled and analyzed to obtain an accuracy equivalent to that obtained by applying the methods described in the Sampling Guide for Air Contaminants published by the Institut de recherche Robert-Sauvé en santé et sécurité du travail du Québec, as it reads at the time that it is applied.

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

DIVISION VI
INDIVIDUAL PROTECTIVE RESPIRATORY EQUIPMENT

45. **Protective equipment**: Where existing technology prevents an employer from complying with sections 40 and 41, and for work involving maintenance, inspection or repairs outside the workshop, or transportation where the standards provided for in sections 40 and 41 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 shall provide the worker, free-of-charge, with respiratory protective equipment and ensure that he uses it, as indicated in the Guide des appareils de protection respiratoire utilisés au Québec, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time that it is applied.

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." A respiratory protection program shall be drafted and applied in compliance with this standard.

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 Appareils de protection respiratoire : demi-masques filtrants contre les particules : exigences, essais, marquage 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 the health, safety and physical well-being of workers.

46. **Prohibition**: Notwithstanding section 45, an employer may not provide the worker with a self-contained or air-supplied protective respiratory apparatus equipped with an automatic device which interrupts or restricts the air supply in the part of the apparatus covering the face.

47. **Use of protective equipment**: The respiratory protective equipment prescribed in section 45 shall be :

(1) designed to offer protection from the danger to which the worker is exposed ;

(2) kept in good working order ;

(3) inspected by the worker each time he wears it ;

(4) inspected by the employer at least once a month and each time the worker using the equipment reports to his employer that it is not working properly ;

(5) disinfected before being used by another worker, except in an emergency ;

(6) 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.

48. **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 45 and diving equipment as well as the production facilities and the distribution systems for such air, shall comply with the CSA Standard Production and Distribution CAN3 Z180.1-M85.

Samples of this air shall be taken and analyzed to obtain an accuracy equivalent to that obtained by applying the methods described in the Sampling Guide for Air Contaminants published by the Institut de recherche Robert-Sauvé en santé et sécurité du travail du Québec, as it reads at the time that it is applied. 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 by the employer in a register that shall be kept for a period of at least 5 years.

DIVISION VII
FLAMMABLE VAPOURS AND GASES

49. **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.

50. **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.

51. **Prohibition**: Smoking in any area where there may be flammable vapours or gases is prohibited.

52. **Ground**: Any equipment in areas containing flammable vapours or gases shall be grounded.

53. **Ventilation system**: Any ventilation system for removing flammable vapours or gases that may present a danger of fire or explosion shall :

(1) be made of non-combustible substances ;

(2) use ventilators whose rotating parts are made of materials that do not produce sparks ;

(3) have all metallic components grounded ;

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

DIVISION VIII
COMBUSTIBLE DUSTS AND DRY MATERIALS

54. **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.

55. **Ground**: Any equipment, including machines, in rooms where combustible dusts presenting a fire or explosion hazard are generated shall be grounded.

56. **Flammable source**: No flammable source is permitted in areas where combustible dusts present a fire or explosion hazard. Smoking is prohibited.

57. **Fire or explosion hazard**: Machines and equipment presenting a fire or explosion hazard due to combustible dusts, shall be so located, constructed, enclosed or purged as to protect employees near such machines or equipment.

58. **Collection systems**: Any blower system for evacuating pulverized combustible dusts and any other suspended matter presenting a fire or explosion hazard shall be in compliance with subparagraphs 1) to 4) of section 53.

59. **Dust collectors**: Any combustible dust collector that is a dangerous source of fire or explosion shall be designed, manufactured, installed and maintained in compliance with the standard: NFPA-91-1995 Exhaust Systems for Air Conveying Materials.

Dust collectors operating on the date this regulation comes into force shall be designed, manufactured, installed and maintained in compliance with current practices and be made out of fire resistant materials. Such dust collectors shall also:

(1) be provided with explosion vents in accordance with the provisions of the Guide for Venting of Deflagrations, NFPA-68-1998; vents currently installed in collectors at the date that this regulation comes into force may also be used provided that they comply with a previous text of this standard and are in good working order;

(2) if possible, be located outside buildings.

However, if collectors are located indoors, they shall either be placed adjacent to a wall or ceiling opening outdoors towards which they are channeled by ducts designed so that pressure caused by an explosion does not entail the rupture of the duct or the dust collector, or be equipped with an automatic system for preventing explosions in compliance with the standard NFPA 69-1997 Explosion Prevention Systems.

60. **Silos**: Silos used for storing dry combustible substances shall be:

(1) made of fire resistant materials;

(2) provided with covers and adequate ventilation;

(3) provided with explosion vents complying with the standard Guide for Venting of Deflagrations, NFPA 68-1998, where there is a risk of explosion. Vents already installed in silos on the date when this regulation comes into force may also be used if they comply with a previous text of this standard and are in good working order.

DIVISION IX
SPECIAL PROVISIONS CONCERNING VARIOUS DANGEROUS SUBSTANCES

61. **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 recognized in the Safety Code for the construction industry (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 work performed therein under one of the construction categories determined under section 3.23.2 of this Code.

62. **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 container referred to in the preceding paragraph. The label shall permanently include the following indications and be easily legible:

(1) materials containing asbestos;

(2) toxic if inhaled;

(3) keep container tightly closed;

(4) do not inhale the dust.

63. **Protective suit**: The employer shall 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 outside the workplace.

64. **Lead**: The recovery of lead or lead products and other related operations shall be performed inside an establishment in compliance with the requirements under section 107.

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

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

(1) the recovery or melting of lead or lead products;

(2) the manufacturing of lead batteries;

(3) the manufacturing of lead powders or salts, chlorine, fluorescent lamps or caustic soda where workers must handle lead or mercury;

(4) any work involving exposure to crocidolite asbestos, amosite or any other type of amphibole;

(5) any work involving 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.

67. **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.

Workers thus exposed may not wear their work clothes elsewhere than on the work premises.

68. **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.

69. **Other protective equipment**: In addition to the requirements under section 68, 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 disposal of workers 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*

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

(1) compressed gases;

(2) flammable and combustible substances;

(3) combustive substances;

(4) toxic substances;

(5) corrosive substances;

(6) dangerously reactive substances.

71. **Controlled product**: 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.

A dangerous substance that is both a controlled product and one appearing on the list in Schedule II, shall meet the requirements of this section applying to it, as

regards each and every category to which it belongs both as a controlled product and a substance appearing on the list.

72. **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:

(1) separate or isolate any dangerous substances which when mixed with other substances, may cause a fire or an explosion, or may discharge flammable or toxic gases;

(2) keep containers, piping and other apparatus in good working order;

(3) clean immediately but safely any dangerous substance spilled on floors or shelves;

(4) when pouring from one container to another, use a secure recipient taking into account the type of dangerous substance being poured;

(5) depending on the category in which the dangerous substance is classified, it shall comply with sections 77 to 99.

73. **Monitoring devices**: The devices for monitoring any open recipient containing liquid state dangerous substances at temperatures in excess of 60 °C shall be isolated or equipped with screens in order to protect workers from splashes if such substances are agitated or heated.

74. **Level indicators**: Level indicators on reservoirs, vats or other containers with liquid state dangerous substances at temperatures in excess of 60 °C shall be provided with protective screens.

75. **Emergency equipment**: Emergency showers and eye wash fountains shall be put at the disposal of workers in the following circumstances:

(1) when a corrosive substance or other dangerous substance is likely to rapidly cause serious or irreversible damage to the skin or eyes of workers.

(2) when a toxic substance is likely to be rapidly absorbed by the skin or the eyes and cause them to have serious irritations.

In other cases, equipment for rinsing eyes and washing skin, such as showers, portable showers, eye wash fountains or any other type of plumbing shall be put at the disposal of workers, according to the nature of the dangers to which they are exposed. Such equipment shall be located near the work station of the exposed workers.

76. **Shower facilities**: Emergency showers and eye wash fountains referred to in the first paragraph of section 75 shall be clearly identified and easily accessible. In addition, they shall be located within the immediate vicinity of exposed workers and supplied with warm water.

Water from showers supplied by a drinking water network as well as water supplying portable showers shall be regularly changed to ensure its safety.

The warm water supply only applies to showers installed or modified starting one year after this regulation comes into force.

§2. *Compressed gases*

77. **Compressed gas cylinders**: All compressed gas cylinders shall:

(1) comply with the Act respecting pressure vessels (R.S.Q., s. A-20.01) and its regulations, as they stand when applied;

(2) be kept away from any source of heat and not be exposed to temperatures in excess of 50 °C;

(3) be used only for the purposes for which they were designed;

(4) be handled in such a manner as not to damage them, and be fastened upright or held in a cart when in use;

(5) be kept in an upright position with the valves facing upwards and be solidly held in place;

(6) be equipped with a protective cap for the valves when not connected for use.

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 protected from being accidentally 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 for use shall be stored in accordance with the Propane Installation Code, CAN/CGA B149.2-M91.

Non-reusable propane gas cylinders shall also 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:

(1) away from areas with a high fire hazard;

(2) away from combustive substances or powerful oxidizing 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 a level of safety equivalent to that prescribed in this standard.

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

84. **Reactive substances flammable in contact with air**: Reactive substances that are flammable in contact with air to the point of being able to burn shall be kept either:

(1) under an inert liquid;

(2) in an inert atmosphere;

(3) in sealed containers.

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

(1) in closed containers;

(2) away from sources of humidity;

(3) away from plumbing with condensation or drippings.

§4. *Combustive substances*

86. **Interpretation**: For the purposes of sections 87 to 91, powerful oxidizing 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:

(1) a corrosive substance with which they may react by exploding;

(2) an inflammable or combustible substance with which they may react violently;

(3) a toxic substance;

(4) a reducing agent, especially a metallic powder;

(5) a substance which oxidizes easily, including wood surfaces.

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

(1) be stored closed;

(2) have their content clearly identified;

(3) be kept in cool, dry places;

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

90. **Ground**: Equipment, including machines, used for processing or handling combustive substances such as organic 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:

(1) away from areas of high fire hazard and from heat sources;

(2) away from combustive substances and powerful oxidizing agents;

(3) in cool and well ventilated areas.

93. **Overflow prevention devices**: Reservoirs and vats containing liquid state toxic substances shall be equipped with overflow prevention devices.

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

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

95. **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*

96. **Storage**: Corrosive substances shall be stored:

(1) away from areas with a high fire hazard;

(2) away from combustive substances and powerful oxidizing agents;

(3) protected against direct sun rays;

(4) in cool and well ventilated areas.

In addition, corrosive acid substances shall be stored away from corrosive antacid substances.

97. **Containers for corrosive substances**: Containers for corrosive substances shall:

(1) be kept closed;

(2) have their content clearly identified;

(3) handled with care.

98. **Protection from splashes**: Open reservoirs and vats in which liquid-state corrosive substances are agitated with compressed air or steam heated, shall be protected so that workers are not exposed to splashes.

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

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

§7. *Dangerously reactive substances*

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

DIVISION XI
VENTILATION AND HEATING

101. **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 installation.

In addition, all work stations shall be ventilated as to comply with the standards provided under sections 40 and 41, with the exception of work stations assigned to out-of-shop inspections, maintenance or repairs.

102. **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.

103. **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.

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

105. **Ducts**: Ducts used to transport contaminated air shall not be used for any other purpose, and must not risk contaminating the workplace.

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

107. **Local ventilation**: Any localized source at a stationary work station 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.

108. **Recirculation of air**: Any air recirculation system shall be designed so that:

(1) 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;

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

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

(4) there is no recirculation of gases, vapours, mists, fumes or dusts which are identified under Schedule I as a substance whose recirculation is prohibited.

109. **Fresh air intake**: Subject to section 108, 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.

110. **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.

111. **Ventilation of change rooms and toilets**: During the hours of operation of an establishment, the change rooms and washrooms shall be ventilated toward the outside of the establishment, either naturally in accordance with section 102, or mechanically by extraction in accordance with the standards prescribed in the following table:

Place		Ventilation (in cubic metres of air per hour)
Change rooms	hooks or lockers for street clothes or unsoiled work clothes	18 m^3/h, per square metre of the room's surface area.
	hooks or lockers for damp work clothes (drying facilities)	**the greater of:** 36 m^3/h, per square metre 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 metre of the room's surface area, or – 45 m^3/h, per toilet or urinal, but not less than 350 m^3/h.
Showers		**the greater of:** – 36 m^3/h, per square metre 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.

112. **Ventilation of a lunch 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 102 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 109.

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 as offices.

113. **Combustion products**: Except in the cases provided for in sections 114 and 115, combustion products vented by the air heating facilities of an establishment shall be evacuated directly outside the establishment by means of a duct.

114. **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

$$\frac{9\ m^3/h}{\text{Megajoule/h}}.$$

115. **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 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 January 23, 1980.

DIVISION XII
HEATING ENVIRONMENT

116. **General conditions**: Subject to sections 117 and 118, in any closed rooms, an appropriate temperature shall be maintained considering the nature of work performed therein as well as outdoor climatic conditions; if such temperature cannot be reasonably maintained, a warm place shall be put at the disposal of workers.

117. **Stationary work station**: In any establishment, the minimum temperature prescribed in Schedule IV shall be maintained at 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, and unless the work station is situated in a motor vehicle, or the work involves maintenance, inspection or repairs outside the workshop.

118. **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.

119. **Relative humidity**: In any closed rooms, a suitable relative humidity percentage shall be maintained according to the type of work performed therein and the outdoor climatic conditions.

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.

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

DIVISION XIII
HEAT STRESS

121. **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.

122. **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 established in Schedule V.

123. **Index exceeds the continuous work curve**: In any establishment where workers are exposed to heat stress conditions such 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 at a temperature of between 10 °C and 15 °C, and one shower per 15 exposed workers.

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

(1) 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;

(2) if the application of subparagraph 1) proves impossible or does not allow the continuous work curve to be reached, control 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;

(3) if the application of subparagraphs 1) and 2) proves impossible or does not allow the continuous work curves indicated in the graph in Schedule V to be reached or while waiting for the alterations required under subparagraph 1) to be done, ensure that the workers wear appropriate individual equipment in accordance with the nature of the heat stress.

DIVISION XIV
LIGHTING

125. **Illumination levels**: Every establishment shall be provided with natural or artificial lighting the intensity of which depends on the nature of the work done at any work station or the nature of the places where workers circulate in order to provide the illumination levels stipulated in Schedule VI.

126. **Method of measurement**: For the purpose of enforcing section 125, 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.

127. **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 as offices.

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

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

DIVISION XV
NOISE

130. **Operations and organization**: Any establishment the operation of which is likely to emit noise at the auditory level of workers shall be operated in accordance with section 136 so that the noise measured at any work station does not exceed the standards prescribed in sections 131 to 135 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.

131. **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 in 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., s. S-2.1).

132. **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:

(1)° by adding the following fractions:

$\frac{C_1}{T_1} + \frac{C_2}{T_2} + ... \frac{C_m}{T_m}$, where C indicates the total time in hours

of exposure at a specific level and where T indicates the total duration in hours of exposure permitted in accordance with section 131;

(2) 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 131.

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 such that the sum of the fractions exceeds the unit.

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

133. **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.

134. **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

135. **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:

$\frac{C_1}{N_1} + \frac{C_2}{N_2} + \ldots \frac{C_m}{N_m}$, where C indicates the total number of impacts at a specific level and N indicates the total number of impacts permitted according to section 134;

(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 an impact sound level such that the sum of the fractions exceeds the unit.

Where the measurements are taken pursuant to subparagraph 2) of the first paragraph, a worker shall not be exposed to impact noises such that the SAE exceeds 160 or such 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.

136. **Corrective measures and individual protective equipment**: The employer shall comply with the standards established under sections 131 to 135 by implementing the measures indicated hereafter in the following order:

(1) reduce the noise at its source;

(2) isolate any work station exposed to the noise;

(3) insulate 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 131 to 135 or until the changes stipulated in the said paragraph are made, the employer shall put hearing protectors at the disposal of workers or shall limit the time that they are exposed to noise, in conjunction with an audiometric testing program.

The measures stipulated in the first paragraph shall be implemented, even if the employer is unsuccessful in complying with the standards prescribed under sections 131 to 135.

137. **Hearing protectors**: Any hearing protector provided to a worker in accordance with the second paragraph of section 136 shall reduce the noise such that the worker is no longer exposed to noises that exceed the standards established in sections 131 to 135.

These hearing protectors shall comply with the CSA Standard Z.94.2-1974 entitled Hearing Protectors.

They shall also be disinfected before being used by another worker, except in an emergency.

138. **Posting of notices**: Where a worker is exposed to noises that exceed the standards established in sections 131 to 135, 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.

139. **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 I 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.

140. **Measurement methods**: For the purposes of enforcing this Division, except for the case provided for in section 133, the noise shall be measured in accordance with CSA Standard Z.107.2-1973 entitled Methods for the Measurement of Sound Pressure Levels.

141. **Measurement of noise**: Noise emitted at a work station 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 131 to 135.

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 noise emitted at a work station. Measurements shall be entered in a register and kept for a period of at least 5 years.

DIVISION XVI
HAZARDOUS RADIATIONS

142. **Infra-red radiation**: All intense infra-red radiation sources shall be shielded by one of the following devices:

(1) heat absorbent screens;

(2) water screens;

(3) any other devices to protect workers.

143. **Ultra-violet radiations**: In areas where operations producing dangerous emanations of ultra-violet radiations such as arc welding and cutting and resistance welding are carried out, the following precautions shall be taken:

(1) enclose the emanation sources with protective screens;

(2) protect the hands and forearms of workers exposed to appreciable doses with gloves or protective creams;

(3) protect eyes and face as required under section 343.

144. **Ionizing radiation**: Workers exposed to ionizing radiation shall be monitored by dosimetry.

In the event of an overdose, workers thus exposed shall undergo medical examinations at more or less regular intervals, depending on the duration of exposure.

DIVISION XVII
QUALITY OF WATER

145. **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., s. Q-2).

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

146. **Authorization**: 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 authorization in accordance with section 32 of the Environment Quality Act.

The authorization 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.

147. **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 Environment Quality Act, 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 once a month.

This section does not apply to bottled water.

148. **Bottled water**: Any bottled water distributed in an establishment shall comply with the stipulations in the Regulation respecting bottled water (R.R.Q., 1981, c. Q-2, r. 5, deemed adopted by section 19 of chapter 50 of the Statutes of 1996, under section 40 of the Agricultural Products, Marine Products and Food Act).

149. **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 that 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.

150. **Water unsafe for drinking**: Any drinking water distribution system intended for workers' consumption 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.

151. **Paper cups**: Except where workers are provided with water fountains, they shall have at their disposal sanitary individual disposable paper cups.

The use of a common glass or cup is prohibited.

When workers are provided with paper cups, a refuse container shall be placed less than 2 metres from the drinking water distributor.

DIVISION XVIII
COMMON FACILITIES

152. In this division as well as in DIVISION XIX, the word "disinfected" means being washed with a bleach-based solution or with some comparable product;

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

The lunch room shall:

(1) occupy a minimum area of 1,1 square metres per worker for all workers likely to eat there at the same time;

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

(3) be separate from the work premises;

(4) be cleaned after each meal period, except for unused spaces,

(5) be disinfected daily;

(6) be equipped with covered garbage containers that shall be leakproof, corrosion resistant, and cleaned daily on working days;

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

(8) not be used for storage purposes.

This section does not apply to facilities used as offices.

154. **Change rooms**: In the case of an establishment or a part of an establishment referred to under sections 41, 69 or in subparagraph 3) of section 124 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 hanging 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.

155. **Change room with drying facilities**: A change room with drying facilities shall be put at the disposal of workers assigned to do work involving compressed air, unless such work is performed occasionally.

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

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

(2) benches and lockers or hooks;

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

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

(5) 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.

156. **Maintenance**: All change rooms and other common facilities put at the disposal of workers shall be maintained in sanitary conditions and cleaned daily.

In addition, change rooms adjacent to toilets or a bathroom or showers shall be disinfected daily.

157. **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.

158. **Camp**: A camp and eating facilities shall be provided to workers who perform work in remote areas that do not offer lodging accommodations, except where the work is carried out over short periods.

159. **Transportation facilities**: Where a camp is not provided in accordance with section 158, the employer shall provide workers with transportation facilities in accordance with Division XXXI.

160. **Camp facilities**: For the purposes of section 158 and 159, "camp" means an aggregate of temporary or permanent facilities, as well as their outbuildings, that the employer organizes 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 XIX
SANITARY FACILITIES

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

The quantity of washrooms, toilets, urinals, sinks, showers and other facilities shall comply in number with the standards provided under Schedule IX.

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

163. **Items for ensuring hygiene**: In washrooms, the following items shall be at the disposal of workers:

(1) soap or another cleaning product;

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

(3) where paper towels are used, waste paper baskets for disposal of such towels.

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

(1) provided with toilet paper;

(2) kept in good working order;

(3) provided with seats.

Any cracked or damaged toilet seat shall be replaced immediately.

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

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

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

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

(4) maintained in sanitary condition;

(5) cleaned and washed before each shift or on the first half of each shift, except if they have not been used;

(6) disinfected daily.

DIVISION XX
SPECIAL ERGONOMIC MEASURES

166. **Handling**: Workers assigned to the handling of loads or persons shall be instructed in the proper manner of performing their work safely.

When the manual moving of loads or persons compromises the worker's safety, mechanical devices shall be put at his disposal.

167. **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.

168. **Level of work**: The height of workbenches and the position of chairs shall be adapted to the work and the worker in such manner as to ensure workers a correct posture and to reduce their fatigue.

169. **Position**: Tools, handles and materials shall be located in positions that facilitate work and reduce strain

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

171. **Break for meals**: When the duration of the work exceeds 5 hours, a break of at least 30 minutes shall be granted to allow workers to eat a meal.

Unless there is agreement to the contrary, this break for meals shall begin in a 2-hour period situated in the middle of the worker's work period.

DIVISION XXI
MACHINES

§1. *Protectors and protective devices*

172. In this division as well as in section 323, "danger zone" means any zone situated inside or around a machine and which poses a risk for the health, safety or physical well-being of workers.

In this division as well as in sections 239 and 267, "protector" means the part of a machine used specifically to isolate a machine's danger zone by means of a material barrier, such as a housing, a cover, a screen, a door or a cabinet.

173. **Applicable provisions**: Subsections 1 to 3 apply, with necessary adaptations, to all types of machines, subject to the provisions of subsections 4 to 9.

174. **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.

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

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

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

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

176. **Interlocked protector**: An interlocked protector equipped with an interlocking device shall have the following characteristics:

(1) it remains in place and is interlocked as long as the machine or its dangerous parts remain in operation;

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

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

177. **An automatic closing protector**: An automatic closing protector is one that returns to its place automatically to isolate the worker completely from the danger zone, once the material that triggered its movement is removed from the machine.

178. **Adjustable protector**: An adjustable protector is one that shall be adjusted to the material in order to isolate the worker from the danger zone completely and at all times.

179. **Sensor device**: A sensor device is one that reacts by causing the elimination of risks associated with the danger zone, as soon as a worker approaches within a given distance of this zone.

180. **Two-hand control**: Any two-hand control shall have the following characteristics:

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

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

(3) it is kept at a safe distance from the danger zone.

181. **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.

182. **Controlling the danger zone**: Subject to section 183, a machine shall be designed and built so as to make its danger zone inaccessible, failing which it shall be equipped with at least one of the following protectors or protective devices:

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

(a) a permanent protector;

(b) a protector fitted with an interlocking device;

(c) an interlocked protector fitted with an interlocking device;

(d) a sensor device;

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

(a) a protector fitted with an interlocking device;

(b) an interlocked protector fitted with an interlocking device;

(*c*) an automatic closing protector;

(d) an adjustable protector;

(e) a sensor device;

(f) a two-hand control.

183. **Equivalent safety precautions**: Section 182 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, notably a snow blower, a railway switch or a medical appliance intended to act directly on a patient.

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

184. **Installation**: Subject to section 186, before operating a machine, the protectors shall be installed or the protective devices shall be operational.

185. **Making secure**: Subject to the provisions of section 186, before undertaking any maintenance, repair or unjamming work in a machine's danger zone, the following safety precautions shall be taken:

(1) turn the machine's power supply switch to the off position;

(2) bring the machine to a complete stop;

(3) each person exposed to danger locks off all the machine's sources of energy in order to avoid any accidental start-up of the machine for the duration of the work.

186. **Adjustment, repair, unjamming, maintenance and apprenticeship**: When a worker must access a machine's danger zone for adjustment, unjamming, maintenance, apprenticeship or repair purposes, including for detecting abnormal operations, and to do so, he must move or remove a protector, or neutralize 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 characteristics:

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

(2) 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;

(3) it only allows the operation of these dangerous parts under enhanced security conditions, for instance,

at low speed, under reduced tension, step-by-step or by separate steps.

187. **Characteristics of a protector**: A protector or a protective device shall not:

(1) cause additional risks for workers;

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

188. **Spare part**: When a protector or a protective device is replaced, the spare protector or protective device shall offer safety features at least equivalent to those of the original part.

§2. *Control devices or switches*

189. **Control devices and switches**: Control devices and switches shall be designed, installed and maintained so as to avoid the accidental start-up or shut-down of a machine.

190. **Start and stop switches**: Each machine shall be equipped with a control device or switch making it possible to start and stop the machine under safe conditions.

191. **Warning device**: When the starting up of a machine constitutes a danger for anyone near the machine, a warning device or any other effective means of communication shall announce the starting up of the machine.

192. **Emergency stop**: Subject to section 270, any machine whose operation requires the presence of at least one worker, shall be equipped with an emergency stopping device or switch.

This device or switch stops the machine, considering the machine's design, in the shortest possible time. In addition, it has the following characteristics:

(1) it is easily visible and within reach of the worker;

(2) one single action activates it;

(3) it is clearly identified.

The resetting of the emergency stopping device after it is used, shall not by itself cause the machine to start up.

193. **Groups of machines**: Any stopping device or switch for a machine belonging to a group of machines that are wired to operate in series, including an emergency shut-off switch, shall in addition be designed to stop serial upstream and downstream machines if their operations constitute a danger for worker safety.

§3. *Pulleys and belts*

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

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

196. **Clutch mechanisms**: When the clutch of a machine is engaged by means of pulleys, this clutch mechanism shall be equipped with a mechanism that prevents the belts from sliding from the idle pulley to the fast pulley.

§4. *Grinding machines and abrasive materials*

197. **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.

198. **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.

199. **Storage of grinding wheels**: Grinding wheels shall be stored:

(1) in compliance with the manufacturer's recommendations;

(2) protected from impacts, in chests or drawers specially designed for such purpose;

(3) in dry areas, protected from sudden temperature changes.

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

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

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

§5. Grinders

201. **Protectors and protective devices**: A grinder shall be equipped with the following protectors and protective devices:

(1) a grinder casing and, if applicable, a wire brush casing;

(2) an adjustable spark shield;

(3) an adjustable workpiece support or chuck;

(4) a transparent screen.

202. **Housing**: The grinding wheel housing shall be built to withstand impacts and the projection of fragments if the wheel ruptures.

203. **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.

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

205. **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.

206. **Abrasive materials**: Sections 198 to 200 apply to grinders.

§6. General purpose machines for wood working and saws

207. **Bandsaw**: Bandsaw wheels shall be housed in a casing.

Moreover, the saw shall be equipped with a protector or protective device 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.

208. **Circular saw**: Circular saws shall be provided with protective hoods or protective devices.

209. **Prohibition**: The use of a saw blade that is not properly adjusted is prohibited.

210. **Safety precautions**: All circular saw blades shall be used solely for the purposes for which they were designed.

Moreover, the saw shall not be operated beyond the maximum speed specified by the blade manufacturer, nor shall the blade exceed the maximum diameter specified by the machine manufacturer.

211. **Guide blocks and gages**: Guide blocks and gages for pit saws and crosscut saws shall be available and in good condition.

212. **Knife-type splitter**: Hand-fed circular saws such as pit saws and crosscut saws shall be equipped with a knife-type splitter, which shall be chosen and installed according to trade practice.

213. **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.

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

§7. Presses

215. **Applicable provisions**: The provisions of this subdivision apply to all presses, including full-cycle punch presses and friction clutch presses.

216. **Power shut-off mechanism**: A press shall be equipped with a power shut-off mechanism, such as a switch or a general circuit breaker.

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

217. **Start-up**: The starter of the punch press motor shall be protected against inadvertent or accidental starts.

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

218. **Auxiliary circuits**: The auxiliary circuits of the punch press, such as those linked to two-hand control units and solenoid valves, shall only be powered by

a transformer having a secondary conductor that is insulated, i.e. grounded.

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

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

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

220. **Purge valve**: The pneumatic components of a punch press shall be equipped with an automatic purge valve which will close off the air supply and automatically purge the circuit.

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

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

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

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

§8. *Full-cycle punch presses*

223. **Single action mechanism**: A full-cycle punch press shall 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.

224. **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 of the clutch control shall 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 shall be less than the diameter of the wire.

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

§9. *Friction clutch presses*

226. **Safety precautions**: A friction clutch press shall:

(1) have clutch-braking control devices that automatically stop the press by activating the clutch and brakes; this clutch action shall remain inoperative until activated;

(2) be equipped with lockable control devices for switching off-circuit and for single or automatic step advancing;

(3) require the use of a two-hand control device in step-by-step advancing mode, except if the danger zone is not accessible or is protected by a protector or protective device;

(4) never be used for production in step-by-step advance mode;

(5) be equipped with double or twin load breakers when the clutch is air-powered; any failure of a load breaker shall prevent the press from operating.

DIVISION XXII
HAND TOOLS AND PORTABLE POWER TOOLS

227. **Safe usage**: Hand tools and portable power tools shall be appropriate for the job for which they are intended and be used solely for the purposes for which they were designed.

228. **Inspection and maintenance**: Hand tools and portable power tools shall be examined regularly and if found defective, be repaired or replaced.

229. **Storage of hand tools**: Hand tools shall not:

(1) be left on the floor, in passages, on stairs or in other areas where people work or circulate;

(2) be placed in elevated locations from where they could fall on people.

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

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

232. **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.

233. **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, shall be kept free of burrs.

234. **Cutting tool**: A cutting tool, such as an axe or a saw shall be transported in such manner to as prevent any contact with the worker, namely by being stored in a box or in a covered container, or firmly attached to the vehicle.

235. **Ground**: A portable electric power 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.

236. **Position of trigger**: The trigger on a portable electric power tool shall be so designed as to eliminate any risk of an accidental start-up.

237. **Air supply inlet valve control**: 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.

238. **Electrical wire and flexible hose**: If they hamper circulation, the electrical wire feeding an electric power tool and the flexible hose supplying an air-driven power tool with compressed air shall:

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

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

239. **Protectors and protective devices**: Protectors or protective devices for portable power tools shall be left in place when such tools are being used.

240. **Safety precautions**: When carrying a portable power tool from one working area to another, the following precautions shall be taken:

(1) cut off the power supply;

(2) wait for the tool to come to a complete stop.

241. **Chain saw**: Portable power saws and chain saws shall comply with the CAN3-Z62.1-M85 Chain saw standard.

Notwithstanding the first paragraph, they shall be equipped with an anti-vibrating system.

242. **Conditions for using a chain saw**: A portable power saw or chain saw shall only be used under the following conditions:

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

(2) it may only be started if the chain stopper is applied;

(3) it may 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 except if it weighs less than 6,8 kilograms;

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

(5) it shall have the chain stopper applied when not held firmly by the worker and while being carried from one work area to another;

(6) it shall be equipped with a chain that is sharpened, adjusted and maintained according to the manufacturer's recommendations;

(7) it shall never be used any higher than shoulder level;

(8) it shall only be adjusted or serviced when the motor is turned off;

(9) it shall never be fueled when there is a fire or explosion hazard;

DIVISION XXIII
HANDLING AND TRANSPORTING MATERIAL

§1. *Handling techniques*

243. **Inclined plane**: Where a worker uses an inclined plane for raising or lowering heavy objects, he shall:

(1) avoid standing on the lower end of the plane;

(2) control the movement of such objects by means of cables, blocks, wedges or other apparatus.

244. **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.

§2. Hoisting devices

245. **Operating conditions**: 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:

(1) be inspected before it is used for the first time;

(2) have its motor turned off when filling the gas tank;

(3) not be used if strong winds, storms or extreme temperatures make it dangerous to use;

(4) not be used when repair or maintenance work is being carried out;

(5) be inspected and maintained in accordance with the manufacturer's instructions or standards offering equivalent safety;

(6) when one of its parts is repaired, reconditioned or replaced, provide as regards this part a level of safety that is equivalent to that of the original part;

(7) 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.

246. **Hoisting accessories**: Hoisting accessories shall be solidly built, have requisite resistance, depending on their use, and be kept in good working order.

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

248. **Precautions**: A hoisting device shall not:

(1) be loaded beyond its rated load;

(2) be subject to sudden movements.

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

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

(1) be so placed as to be easily read by the operator;

(2) provide information which complies with that provided by the manufacturer;

(3) furnish all the necessary information for the safe operation of the crane or apparatus.

251. **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 recognized standard offering equivalent safety.

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

(1) with bumpers or boom stops;

(2) a high boom angle switch.

253. **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. The signalman shall:

(1) observe the movement of the apparatus or the load when it is out of sight of the operator;

(2) communicate 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.

254. **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.

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

(1) 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;

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

(3) 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 competent person representing the employer;

(4) if the uncontrolled movement or the swinging of a raised load involves a danger, one or more guide ropes shall be used;

(5) the hoisting device shall not be left unsupervised when a load is suspended therefrom;

(6) the moving of loads above people shall be avoided and, if this is not possible, then specific measures shall be taken to ensure the safety of these persons;

(7) it is prohibited for any person to stand on a load, a hook or a sling suspended from a hoisting device;

(8) 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.

256. **Lift truck**: A lift truck built starting on the date of the coming 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 the date of the coming 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.

257. **Lifting jacks**: Lifting jacks that are used to lift loads shall:

(1) rest on solid bases;

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

(3) be equipped with a positive stop to prevent overstop or a stop indicator.

258. **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.

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

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

(2) a warning device when the hoisting device is motorized, except in the case of a person-lifter.

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

260. **Prohibition**: Subject to section 261, no operator shall lift a worker using a hoisting device, unless the latter was designed for that purpose by the manufacturer.

261. **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.

262. **Aerial basket**: Every vehicle with an aerial basket shall be equipped with an emergency stop button located within reach of the worker occupying the basket.

263. **Carrier vehicle**: Every vehicle carrying an aerial basket shall provide stable and structurally adequate support when the basket is used.

264. **Protection against falls**: The wearing of a safety harness is compulsory for any worker occupying the aerial basket of a lifting device, except if the worker is protected by some other device that provides him with equivalent safety.

A safety harness shall be equipped with an energy absorber and a lifeline attached to an anchorage point specified by the manufacturer or any other 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*

265. **Carrying elements**: The carrying elements of conveyors shall be designed to safely support the loads that are hauled.

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

267. **Protection from falling objects**: Conveyors shall preferably not be installed above passages and work stations; otherwise they shall be provided with guardrails to prevent the falling of objects

268. **Aerial conveyor**: Subject to section 324, an aerial conveyor shall be equipped with a footbridge in compliance with section 31, when there is a danger of falling, and when workers must circulate on the conveyor.

269. **Safety precaution**: When a conveyor is in operation, it is prohibited to climb onto the moving part or to stand on the conveyor frame.

This prohibition does not apply to conveyors designed specifically for moving people and used for such purpose, or to slow-moving conveyors to which workers may safely have access.

270. **Emergency stop**: The emergency stop device of a conveyor to which workers have access comprises several control devices located at loading and unloading piers as well as at other points along the conveyor's itinerary. In addition, these devices have the following features:

(1) they are easily visible;

(2) one single action activates them;

(3) they are clearly identified.

The resetting of the emergency stop device after it is used, shall not by itself cause the start up of the machine, except if the conveyor is moving slowly and workers can have access to it safely.

271. **Bucket conveyors**: A bucket conveyor shall be:

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

(2) 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*

272. **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:

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

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

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

(4) when one of its parts is repaired, reconditioned or replaced, this new part shall provide a level of safety that is equivalent to that of the original part.

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

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

(1) be equipped with efficient brakes;

(2) be equipped with a warning device (siren).

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

Subparagraph 2) of the first paragraph does not apply to tracked bulldozers and hauling machines.

275. **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 moving vehicle part, and is not otherwise injured by operating the vehicle on entering or leaving the cab.

276. **Protection of the driver**: The self-propelled vehicle shall be equipped with a roof, a protective screen, a cab or a structure to protect the driver in the following cases:

(1) where there is a risk of falling objects;

(2) if the driver risks impact with an object being handled.

277. **Protective structure of self-propelled vehicles**: The following self-propelled vehicles manufactured starting on the date on which this regulation comes into force shall be provided before 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:

(1) 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;

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

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

This section does not apply to a low profile agricultural tractor when it is used in an orchard.

278. **Protective structures of existing self-propelled vehicles**: The following self-propelled vehicles manufactured before 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) standardization organization or a standard providing equivalent safety:

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

(2) graders;

(3) tractor scrapers;

(4) 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 if these vehicles only circulate in places where there is no risk of overturning. Nor does it apply to a low profile agricultural tractor when used in an orchard.

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

(1) the name of the manufacturer;

(2) the protective structure's serial number;

(3) the standard with which it complies;

(4) 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.

280. **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.

281. **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 is a risk of injuring the driver should the cable snap.

282. **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.

283. **Vehicle in motion**: No worker shall remain on the load of a self-propelled vehicle in motion.

284. **Signalman**: When a self-propelled vehicle moves in reverse, a signalman shall direct the driver if such a move poses a risk for the safety of a worker or the driver.

285. **Prohibition**: The driver of a self-propelled vehicle referred to under section 277 or 278 shall not leave his vehicle unattended when the mobile part of the device used for lifting, towing or pushing a load is in a raised position.

§5. *All terrain vehicles*

286. **Operating conditions**: The use of an all terrain vehicle is only permitted under the following conditions:

(1) the vehicle is mounted on at least four wheels;

(2) it is equipped with a portable fire extinguisher of the type ABC approved by Underwriters Laboratories of Canada (U.L.C.), if the task involves any risk of fire;

(3) it is equipped with a yellow warning flag measuring at least 0,05 square metres and placed at least 1,5 metres above ground level, if the vehicle is used in yards;

(4) the workers have been trained and warned of the specific dangers related to the use of this type of vehicle;

(5) the driver shall wear the following individual protective equipment:

(a) a protective helmet of the type for motorcyclists or snowmobile users in compliance with the Regulation

respecting protective helmets for motorcyclists and snowmobile users and their passengers, set forth in Order in Council 1015-95 dated July 19, 1995;

(b) protective goggles or a visor designed to be attached to a protective helmet;

(c) flexible gloves that provide a firm grip on the vehicle's handles and controls;

(6) The wearing of protective equipment provided under sub-subparagraphs *a* and *b* of subparagraph 5 is also mandatory for all passengers.

287. **Prohibition**: It is prohibited to use an all-terrain vehicle for pulling a load with any attachment which in the event it snaps, may cause a backlash effect.

DIVISION XXIV
PILING OF MATERIALS

288. **Piles of material**: Piling of materials shall be performed such that the piles do not obstruct:

(1) the proper distribution of natural or artificial lighting;

(2) the proper operation of machines or other facilities;

(3) traffic in passages, aisles, stairs, elevators and near doors;

(4) access to electric panels;

(5) access to showers and other emergency equipment;

(6) the efficient operation of automatic sprinkler systems or access to fire fighting equipment.

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

289. **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 withstand the lateral pressure.

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

DIVISION XXV
HANDLING AND USING EXPLOSIVES

291. **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 within the meaning of the Regulation respecting occupational health and safety in mines approved by Order in Council 213-93 dated February 17, 1993.

292. **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 recognized by the latter.

293. **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 292.

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.

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

295. **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.

296. **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 Act respecting Occupational Health and Safety.

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 Act respecting Occupational Health and Safety or of an order under section 186 of that Act, by reason that he refused to comply with the Act or this regulation.

DIVISION XXVI
WORKING IN AN ENCLOSED AREA

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

"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 area;

"hot work": any work that requires the use of a flame or that can produce an ignition source.

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

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

300. **Gathering information before work**: Before any work or task is carried out in an enclosed area, the following information shall be available, in writing, on the work premises:

(1) information on the specific dangers associated with the enclosed area and that concern:

(a) 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 area or nearby;

(b) the fact that the natural or mechanical ventilation is insufficient;

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

(d) the interior configuration;

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

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

(g) any other special circumstances such as the presence of rodents or insects;

(2) 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:

(a) safe methods and techniques for carrying out the work;

(b) appropriate and necessary work equipment to perform the work;

(c) the personal or collective protective means and equipment that the worker shall use when performing his work;

4) the rescue procedures and equipment stipulated in section 309.

The information referred to in subparagraph 1) of the first paragraph shall be collected by a qualified person.

The precautionary measures referred to in subparagraph 2) of the first paragraph shall be drafted by a qualified person and implemented.

301. **Information provided to workers prior to performing work**: Information referred to in subparagraphs 1) and 2) of the first paragraph of section 300 shall be conveyed and explained to all workers before they enter an enclosed area; this information shall be given by someone who is capable of adequately informing the workers on how to perform the work safely.

302. **Ventilation**: Except in cases where the safety of workers is ensured in compliance with subparagraph 3) of section 303, no worker may enter or be present in an enclosed area unless the latter is ventilated either by natural or mechanical means such that the following atmospheric conditions are maintained:

(1) the concentration of oxygen shall be greater than or equal to 19,5% and less than or equal to 23%;

(2) the concentration of inflammable gases or vapours shall be less than or equal to 10% of the lower explosion limit;

(3) the concentration of one or more contaminants referred to under the sub- subparagraph of subparagraph 1) of the first paragraph of section 300 shall not exceed the standards provided in Schedule I for these contaminants;

If it proves impossible by ventilating the enclosed area to maintain an internal atmosphere in compliance with the standards provided under subparagraphs 1) and 3) of the first paragraph, a worker may only enter or be present in this area if he wears the respiratory protective equipment specified in section 45 and if the internal atmosphere of this enclosed area complies with subparagraph 2) of the first paragraph.

303. **Combustible dusts**: No worker may enter or be present in an enclosed area where there are combustible dusts posing a risk of fire or explosion unless the safety of the worker is ensured by the implementation of one of the following procedures:

(1) by maintaining and controlling such dusts at a safe level;

(2) by controlling existing ignition sources in the enclosed area associated with the training of the worker, by a qualified person, on the methods and techniques to be used for performing the work safely;

(3) by making the atmosphere in the enclosed area inert, associated with the worker wearing the respiratory protective equipment specified in section 45 and the training of the latter in compliance with subparagraph 2).

304. **Hot work**: Wherever hot work is performed in an enclosed area, a worker may only enter or be present therein if the following conditions are met:

(1) the conditions provided under sections 302 and 303;

(2) a continuous monitoring of the concentration of inflammable gases and vapours found therein is carried out by a direct reading instrument equipped with an alarm.

305. **Special measures**: Unless special precautionary measures are taken by the employer, no worker may enter or be present in an enclosed area when a qualified person has detected the presence of a contaminant, other than those referred to under section 300 and whose concentration requires the taking of such measures.

These measures include training devised by a qualified person and dealing with methods and techniques that shall be employed by the worker to carry out his work safely in this enclosed area. 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.

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

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

(2) if circumstances modify the internal atmosphere of the enclosed area and result in the evacuation of workers due to the fact that the quality of the air no longer complies with the standards set out in subparagraphs 1) to 3) of the first paragraph of section 302;

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

The readings shall be taken in such a manner as to obtain an accuracy equivalent to that obtained following the methods described in section 44 or, when these measures cannot be applied, by following another recognized method.

307. **Register of readings**: The results of the readings made under section 306 shall be recorded by the employer in a register, on the work premises, identifying the enclosed area 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 subparagraphs 1) to 3) of the first paragraph of section 302, the readings shall only be recorded in the register if the alarm goes off.

Only those entries in the register that do not comply with the standards set out in subparagraphs 1) to 2) of the first paragraph of section 302 shall be kept for a period of at least 5 years.

308. **Supervision**: When a worker is present in an enclosed area, another person posted 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.

The person responsible for the supervision shall remain outside the enclosed area.

309. **Rescue procedure**: A rescue procedure making it possible to rapidly assist any worker performing work in an enclosed area shall be established and tested. Such a procedure shall be implemented as soon as any 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 harnesses, lifelines, a first aid kit with emergency equipment as well as recovery equipment.

310. **Unobstructed access**: The personal or collective protective means or equipment used by workers shall not obstruct them when entering or leaving an enclosed area.

311. **Precautions regarding free flow materials**: No person may enter an enclosed area 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.

312. **Safety harness**: When it is essential that workers enter an enclosed area where free flow materials are stored, each worker entering such an area shall wear a safety harness.

The safety harness shall be attached to a lifeline that is as short as possible and that is firmly attached outside the enclosed area.

DIVISION XXVII
WELDING AND CUTTING

313. **Prohibition**: Welding and cutting operations are prohibited close to combustible substances or in places containing flammable gases or vapours or combustible dusts presenting a fire or explosion hazard, unless special precautions are taken to prevent any risk of fire or explosion.

314. **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.

315. **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.

316. **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.

317. **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.

318. **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 and made a reading of the concentration of inflammable vapours and gases, 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:

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

(2) the recipient has been purged with 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.

319. **Antiback-up arresters**: The oxygen lead hose and the gas lead hose to a torch shall be equipped with at least an antiback-up gas arrester and an antiback-up flame arrester. The arresters shall comply with the manufacturer's instructions.

320. **Ground**: 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 process.

However, 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.

321. **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 XXVIII
OTHER HIGH RISK TASKS

322. **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.

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

(1) isolate the danger zone of a machine in operation or protect workers who are nearby;

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

324. **Work presenting a falling hazard**: Maintenance, repair or de-jamming work that presents a falling hazard shall be performed with the assistance of scaffolds, work platforms, bridges, portable ladders, safety harnesses or other appropriate equipment.

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

326. **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 an enclosure specially designed for abrasive air blasting and equipped with a vacuum system.

This section does not apply to automated cleaning systems.

327. **Piping for compressed air**: Piping in which compressed air flows shall be protected from all impacts and be clearly identified as to the nature of its contents.

328. **Attachments**: Flexible hoselines in which compressed air flows shall be equipped with one of the following attachments in the event of section-by-section assembly:

(1) collars located on either side of the connection and held together by an attachment;

(2) an automatic locking device;

(3) a coupling fitted with a clamping device.

329. **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, with the exception of section 9.7.1, as it reads at the time that it applies.

330. **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 as it reads at the time that it applies.

331. **Work performed near an electric power line**: Any work carried out near an electric power line shall be done in compliance with section V of the Safety Code for the construction industry as it reads at the time that it applies.

332. **Deforestation work**: Deforestation work not involving the recovery of wood, which is mainly performed prior to the construction of an electric power 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.

DIVISION XXIX
VEHICLE MAINTENANCE

333. **Automotive lifts and elevating platforms**: In buildings built from the date this regulation comes into force, automobile vehicle or self-propelled vehicle maintenance and repair garages shall be equipped with automotive lifts and elevating platforms instead of ground level pits, unless such pits are needed for technical reasons.

334. **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:

(1) 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;

(2) in the event that the pit is arranged differently, it shall be equipped with a separate mechanical ventilation system capable of providing an air flow equal to at least 12 times the volume of the pit 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.

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

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

337. **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 XXX
MEANS AND EQUIPMENT FOR INDIVIDUAL AND GROUP PROTECTION

338. **Employer's obligations**: The employer shall provide the worker free-of-charge with the individual or collective means and equipment provided under this section, as well as sub-subparagraph *c* of subparagraph 2) of the first paragraph of section 300 and section 312 and ensure that the worker, when performing his work, uses such means and equipment.

The employer shall also ensure that the workers have received requisite information on the use of such protective means and equipment.

339. **Worker's obligations**: The worker shall wear or use, as the case may be, the individual or collective protective means and equipment provided in this section, as well as in sub-subparagraph *c* of subparagraph 2) of the first paragraph of section 300 and section 312.

340. **Safety precautions**: In areas where there is a danger of contact with moving parts, workers shall comply with the following standards:

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

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

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

341. **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 electric shock.

342. **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, from penetration by falling objects or from lateral impacts or by an electric shock.

343. **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 danger that may cause injury to his eyes or face by:

(1) particles or objects;

(2) dangerous substances or molten metals;

(3) intense radiation.

344. **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:

(1) by perforation;

(2) by electric shock;

(3) by an accumulation of electrostatic charges;

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

(5) by contact with molten metal;

(6) by contact with dangerous substances in a liquid state and at intense temperatures;

(7) by contact with dangerous substances that are corrosive;

(8) during other dangerous tasks.

345. **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, splashes of molten metals or in contact with dangerous or infectious substances.

346. **Devices for protection from falls**: The wearing of a safety harness is mandatory for all workers exposed to falls of over 3 metres from their work stations, 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 of access or egress.

347. **Safety harnesses**: A safety harness shall comply with the CAN/CSA Z259.10-M90 Safety Harness standard and be used with one of the following systems:

(1) a shock absorber attached to a lifeline preventing a fall in excess of 1,2 metres;

(2) a harness retractor that includes a shock absorber or that is attached thereto.

The shock absorber shall comply with the CAN/CSA Z259.11-M92 standard on personal fall arrest systems

The lifeline shall comply with the CAN/CSA Z259.1-95 standard covering Safety Belts and Lanyards.

The harness retractor shall comply with the CAN/CSA Z259.2-M1979 standard covering shock absorbers, personal fall arrest systems and lowering devices.

348. **Anchorage point**: The anchorage point for a safety harness lifeline shall be attached in one of the following ways:

(1) be anchored to some point with a tensile strength at break of at least 18 kilonewtons;

(2) be attached to a sliding sleeve in compliance with the CAN/CSA Z259.2-M1979 standard covering shock absorbers, personal fall arrest systems and lowering devices 1979;

(3) be attached 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.

349. **Vertical lifeline**: A lifeline shall:

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

(2) be used by one person only;

(3) be less than 90 metres in length;

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

(5) be protected so as not to come into contact with any sharp edges;

(6) not have been spliced.

350. **Safety belt**: Where a worker is equipped with a safety belt, it can be used only to limit the movement of a worker or to keep him in his working position.

Such a belt shall comply with the CAN/CSA Z259.1-95 standard covering Safety Belts and Lanyards.

A safety belt may not be used as individual protective equipment to stop the fall of a worker.

351. **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:

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

(2) 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.

352. **Safety snap and safety lock**: When the lifeline ends with a locking safety snap, the snap shall be equipped with a self-locking safety catch.

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

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

(2) when the protection offered by the safety harness and personal floatation device is not sufficient because of the nature of the work.

354. **Using a safety net**: A safety net shall:

(1) be placed in such a way as to prevent a person from falling more than 6 metres in free fall;

(2) have sufficient surface spread to intercept a falling person;

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

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

(5) be resistant to atmospheric agents;

(6) be free of all foreign matter;

(7) have a mesh measuring about 150 millimetres by 150 millimetres;

(8) be installed such that upon use the person falling into it will not strike any object above or below the net or be struck by any object whatsoever.

355. **Floatation device**: The wearing of a flotation device is mandatory for all workers who work over water, if the following conditions are met:

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

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

356. **Characteristics of a floatation device**: A personal floatation device shall be adapted to the workplace situation and shall bear a stamp or label attesting to Transport Canada approval.

357. **Safety equipment**: In addition to personal floatation devices, the following safety equipment shall be put at the disposal of workers working over water:

(1) a motorized boat in good working order, moored near the work site, and fitted with:

(a) a life buoy connected to a Manila hemp cord with a diameter of 10 millimetres and at least 15 metres in length;

(b) a life drag;

(c) personal floatation devices in adequate number for the number of rescuers;

(d) paddles;

(2) 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;

(3) an alarm system for triggering rescue operations.

A specific person shall be appointed for directing rescue operations.

DIVISION XXXI
TRANSPORTING WORKERS

358. **Exception**: This section does not apply to automobiles used in general as common carriers.

359. **Application of the Highway Safety Code**: Any automobile used for transporting workers shall be arranged and used in compliance with the Highway Safety Code (R.S.Q., c. C-24.2) and its regulations, except insofar as they are modified under this section.

360. **Prohibited transport**: The transport of workers in trailers and semi-trailers is prohibited.

361. **Other safety standards**: The vehicle used for transporting workers shall:

(1) be driven by a person who has an appropriate licence issued in compliance with the Highway Safety Code;

(2) be examined and maintained so as to protect the health and ensure the safety and physical well-being of workers.

362. **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.

Moreover, if the vehicle is a bus or a minibus, it shall be equipped with:

(1) a dry chemical fire extinguisher, of a type not less than 2-A:10-B:C, approved by Underwriters' Laboratories of Canada;

(2) at least 3 pyrotechnic flares, 3 flashlights or 3 reflectors. In the event 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.

363. **Explosives and dangerous substances**: A vehicle used for transporting workers shall not carry:

(1) explosives, unless such explosives are transported in compliance with the Safety Code for the construction industry as it reads at the time that it applies;

(2) dangerous pesticides and flammable and combustible substances, unless these substances are carried in containers designed for this purpose and outside the compartments occupied by the driver or passengers.

364. **Measures for protecting passengers**: Simultaneous transporting of both workers and materials in the same compartment is subject to the following conditions:

(1) in the case of small material, as long as a stowing device prevents any movement of this material likely to injure passengers;

(2) in the case of bulk material, if a strong device prevents this material from invading the passengers space.

DIVISION XXXII
FINAL PROVISIONS

365. **Repealed regulation**: The Safety Code for the wood-working industry (R.R.Q. 1981, c. S-2.1, r. 5) is repealed.

366. 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 is further amended, in section 2.10.8, by the replacement of the words "Schedule A of the Regulation respecting the quality of the work 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 885-2001 dated July 4, 2001".

367. Section 2.10.9 of this code is amended by the replacement of the first and second subparagraphs by the following:

"**2.10.9.** When it is impossible to reduce the concentration of toxic vapours or gases, fumes, dusts or other harmful or toxic substances to a level lower than limits permitted under section 2.10.8, the employer shall provide the worker with the respiratory protective equipment specified in the Guide des appareils de protection respiratoire utilisés au Québec, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time that it is applied.

The apparatuses referred to in the first subparagraph shall, prior to use by another worker, be disinfected in compliance with the CSA Standard Z94.4-93 entitled "Selection, Use and Care of Respirators.".

368. Section 3.20.1. of this code is replaced by the following:

"**3.20.1.** The wearing of an air-supplied hood as specified in the Guide des appareils de protection respiratoire utilisés au Québec, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time that it is applied, gloves and clothing designed to ensure protection from dust and abrasive or metal projections is compulsory for any worker using an abrasive air blaster unless the worker is isolated from the process.".

369. Section 3.20.2 of this code is amended by the replacement of "Breathable compressed air CSA Standard Z180.1-M1978" by "Breathable compressed air: production and distribution CAN3-Z180.1-M85".

370. This code is amended by the insertion, after section 3.20.5, of the following:

"**3.20.6.** For air blasting, the employer shall put at the workers' disposal a room for changing their clothes. This room shall comply with sections 8.9.2 and 8.9.3.".

371. Section 3.21.3. of this code is amended by the replacement of, in subparagraph b) of the first paragraph, "Section 13 of the Regulation respecting the quality of the work environment (R.R.Q., 1981, c. S-2.1, r. 15)" by "Section 44 of the Regulation respecting occupational health and safety".

372. Section 3.23.14.1. of this code is amended by the replacement of subparagraph 1) of the first paragraph by the following:

"(1) it is specified in the Guide des appareils de protection respiratoire utilisés au Québec, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time that it is applied;".

373. Section 3.23.15. of this code is amended by the replacement of subparagraph 1) of the first paragraph by the following:

"(1) the wearing of a reusable protective respiratory apparatus equipped with a high efficiency filter for protection from asbestos as specified in the Guide des appareils de protection respiratoire utilisés au Québec, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time that it is applied, is compulsory for any worker present in the work area; this equipment shall be selected, adjusted, and maintained in accordance with the CSA Standard Z94.4-93 entitled "Selection, Use and Care of Respirators;".

374. Section 3.23.16 of this code is amended by:

"(1) the replacement, in subparagraphs 1) and 2) of the first paragraph, of "approved by the National Institute for Occupational Safety and Health (NIOSH) for protection from asbestos and listed in the document entitled NIOSH Certified Equipment List dated September 30, 1993" by "specified in the Guide des appareils de protection respiratoire utilisés au Québec, published by the Institut de recherché Robert-Sauvé en santé et en

sécurité du travail, as it reads at the time that it is applied";

(2) the replacement, in subparagraph 4) of the first paragraph, of "section 13 of the Regulation respecting the quality of the work environment" by "section 44 of the Regulation respecting occupational health and safety";

(3) the replacement, in subparagraph 12) of the first paragraph, of "section 13 of the Regulation respecting the quality of the work environment" by "section 44 of the Regulation respecting occupational health and safety".

375. Section 8.3.5. of this code is replaced by the following:

"**8.3.5.** The access to abandoned zones and any non-ventilated sector of the work site shall be declared prohibited for workers.".

376. Section 8.3.6. of this code is replaced by the following:

"**8.3.6.** Self-propelled vehicles used for performing work in underground work sites shall:

(a) if they are powered by an internal combustion diesel type engine, be equipped with an exhaust-gas cooling system making it possible to keep the gas at 83°C, whatever the motor's operating conditions may be;

(b) be equipped with position lights indicating their maximum width;

(c) not discharge into the air non-diluted exhaust gas containing over 0,25% carbon monoxide.".

377. This code is amended by the replacement of "Schedule A" of the Regulation respecting the quality of the work environment (R.R.Q., 1981, c. S-2.1, r. 15)" by "Schedule I of the Regulation respecting occupational health and safety", wherever it may be found in sections 3.10.17, 3.21.2 and 8.3.1.

378. Division II, with the exception of section 2.1.1., of subparagraph *b* of section 2.2.1., of subparagraphs *a*, *d* and *e* of section 2.2.2. and sections 2.3.1. to 2.3.3., division III, subdivision 4.5. of division IV, division V, with the exception of sections 5.2.2. and 5.2.3., divisions VI to XIII and division XIV, with the exception of section 14.1.1. and subdivision 14.3, of the Regulation respecting industrial and commercial establishments (R.R.Q., 1981, c. S-2.1, r.9) are repealed.

379. Division II, with the exception of section 3, divisions III to IX and division X, with the exception of section 79, of Regulation respecting the quality of the work environment (R.R.Q., c. S-2.1, r.15) are repealed.

380. Section 79 of this regulation is amended by the replacement of "8, 40, 50 and 51" by "45, 124, 136 and 137 of the Regulation respecting occupational health and safety, approved by Order in Council 885-2001 dated July 4, 2001".

381. 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, is further amended, under section 85, by the replacement of "in 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 its Schedule A" by "in sections 40 and 41 of the Regulation respecting occupational health and safety, approved by Order in Council 885-2001 dated July 4, 2001 and its Schedule I".

382. This regulation is amended by the replacement of "section 5 of the Regulation respecting the quality of the work environment" by "section 41 of the Regulation respecting occupational health and safety", wherever it may be found in sections 96 and 403.

383. This regulation is amended by the replacement of "Schedule A of the Regulation respecting the quality of the work environment" by "Schedule I of the Regulation respecting occupational health and safety", wherever it may be found in sections 97 and 102.

384. The Regulation respecting safety and health in foundry works (R.R.Q., 1981, c. S-2.1, r.20) is further amended, in section 9, by:

(1) the replacement, in subparagraph *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 "section XIV of the Regulation respecting occupational health and safety, approved by Order in Council 885-2001 dated July 4, 2001";

(2) the replacement, in subparagraph *f*, of "in subdivision 5.1 of the Regulation respecting industrial and commercial establishments" by "in divisions XI, XII and XIII of the Regulation respecting occupational health and safety".

385. Section 138 of this regulation is amended by the replacement of "in section 12.4.1. of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)" by "in section 344 of the Regulation respecting occupational health and safety".

386. Section 139 of this regulation is amended by the replacement "in section 12.3.1. of the Regulation respecting industrial and commercial establishments" by "in section 343 of the Regulation respecting occupational health and safety".

387. Section 140 of this regulation is amended by the replacement "in section 12.7.1. of the Regulation respecting industrial and commercial establishments" by "in section 345 of the Regulation respecting occupational health and safety".

388. The Regulation respecting forestry operations (R.R.Q., 1981, c. S-2.1, r.22) is amended, in section 3, by the deletion of the words "as defined in the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)".

389. Section 15 of this regulation is amended, by the replacement 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 "sections 276 to 280 of the Regulation respecting occupational health and safety, approved by Order in Council 885-2001 dated July 4, 2001".

390. Section 44 of this regulation is amended by the replacement, in subparagraph *a*, of "exceeds the permitted limit according to Schedule 3 of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9) and this" by "exceeds the standards specified in sections 131 to 135 of the Regulation respecting occupational health and safety, for any period of time indicated therein and this,".

391. Section 51 of this regulation is amended, by the replacement of "in sections 12.9.1 and 12.9.2 of the Regulation respecting industrial and commercial establishments" by "in sections 355 and 356 of the Regulation respecting occupational health and safety".

392. Section 58 of this regulation is amended by the replacement, in subparagraph c) of the first paragraph, of " the permitted limit according to Schedule 3 of the Regulation respecting industrial and commercial establishments (c. S-2.1, r.9)" by "the limits permitted in accordance with the Regulation respecting occupational health and safety".

393. Section 63 of this regulation is amended, by the replacement of "by vehicles complying with division XIII of the Regulation respecting industrial and commercial establishments" by "in compliance with division XXXI of the Regulation respecting occupational health and safety".

394. **Coming into force**: This regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*, with the exception of sections 262, 264, 312 and 346.

Section 262 comes into force 1 year following the date on which this regulation comes into force.

Section 264, 312 and 346 come into force on the 180th day following the date on which this regulation comes into force.

Until sections 264, 312 and 346 come into force, the wearing of a safety belt is mandatory for any worker exposed to a fall of more than 3 metres, unless other devices ensure the worker equivalent security. This safety belt must comply with CSA Z259.1-1976 standard covering Safety Belts and Personal Fall Arrest Systems for the construction industries and mines.

SCHEDULE I
(a. 41, 42, 43, 66, 108 and 302)

PERMISSIBLE EXPOSURE VALUES FOR GASES, DUSTS, FUMES, VAPOURS OR MISTS IN THE WORK ENVIRONMENT

DEFINITIONS AND NOTES

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 carcinogenocity 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 4).

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 42.

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 lenght of time whatsoever.

6) mg/m^3 : milligram per cubic meter (milligram of substance per cubic meter 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 airborn 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 108.

12) S : SENSITIZER : 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 40 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.

The average exposure for a 15-minute consecutive period may be include between the TWAEV and the STEV, insofar as such exposures are not repeated more than 4 times a day and have intervals between them of periods of at least 60 minutes.

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.

For any work period equal to or longer than 4 hours but less than 8 hours or a period in excess of 8 hours but less than or equal to 16 hours, an adjusted average exposure value (AAEV) must be established in accordance with the Guide to the adjustment of permissible exposure values for unusual work schedules, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time it is applied. Under no circumstance may the AAEV be higher than the TWAEV.

NOTES DEFINITIONS :

Note 1 : The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1%.

Note 2*a* : Permissible asbestos exposure values in number of respirable fibres per cm^3.

Note 2*b* : Permissible recirculation concentration of asbestos respirable dust : 0,1 mg/m^3.

Note 3 : Where the use of these products is permitted.

Note 4 : Permissible exposure values in number of respirable fibres per cm^3.

Part 1
PERMISSIBLE EXPOSURE VALUES FOR AIRBORNE CONTAMINANTS

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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,RP***
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	
Aluminum (as Al)	[7429-90-5]					

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Alkyls			2			
Metal			10			
Pyrotechnical powders			5			
Soluble salts			2			
Welding fumes			5			
Aluminum oxide (as Al)	[1344-28-1]		10			***Td, note 1***
4-Aminodiphenyl	[92-67-1]	Without applicable permissible exposure value				***Pc,C1,RP,EM***
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		*See* Amitrole				
Amitrole	[61-82-5]		0,2			***C3,RP***
Ammonia	[7664-41-7]	25	17	35	24	
Ammonium chloride fume	[12125-02-9]		10		20	
Ammonium perfluorooctanoate	[3825-26-1]		0,1			***Pc***
Ammonium sulfamate	[7773-06-0]		10			
Amosite		*See* Asbestos				
n-Amyl acetate	[628-63-7]	100	532			
sec-Amyl acetate	[626-38-0]	125	665			
Aniline	[62-53-3]	2	7,6			***Pc***
o-Anisidine	[90-04-0]	0,1	0,5			***Pc,C3***
p-Anisidine	[104-94-9]	0,1	0,5			***Pc***
Anthophyllite		*See* Asbestos				
Antimony [7440-36-0], metal and compounds (as Sb)			0,5			
Antimony trioxide (as Sb)	[1309-64-4]		0,5			***C3***
Antimony trioxide, production (as Sb)		Without applicable permissible exposure value				***C2,RP,EM***
ANTU (α-Naphthylthiourea)	[86-88-4]		0,3			
Argon	[7440-37-1]	Simple asphyxiant				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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/cm³		5 fibres/cm³	***C1,EM***
Amosite (note 3)	[12172-73-5]		0,2 fibre/cm³		1 fibre/cm³	***C1,EM***
Anthophyllite	[17068-78-9]		1 fibre/cm³		5 fibres/cm³	***C1,EM***
Chrysotile	[12001-29-5]		1 fibre/cm³		5 fibres/cm³	***C1,EM***
Crocidolite (note 3)	[12001-28-4]		0,2 fibre/cm³		1 fibre/cm³	***C1,EM***
Tremolite	[14567-73-8]		1 fibre/cm³		5 fibres/cm³	***C1,EM***
Asphalt (petroleum) fumes	[8052-42-4]		5			
Aspirin		*See* Acetylsalicylic acid				
Atrazine	[1912-24-9]		5			
Attapulgite		*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	***C1,RP,EM***
Benzidine (production)	[92-87-5]	Without applicable permissible exposure value				***Pc,C1,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 ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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_2Te_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	***RP***
Boron trifluoride	[7637-07-2]			C1	C2,8	***RP***
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* Chlorobromethane				
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	

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
sec-Butyl acetate	[105-46-4]	200	950			
tert-Butyl acetate	[540-88-5]	200	950			
n-Butyl acrylate	[141-32-2]	10	52			
n-Butyl alcohol	[71-36-3]			C50	C152	***Pc, RP***
sec-Butyl alcohol	[78-92-2]	100	303			
tert-Butyl alcohol	[75-65-0]	100	303			
Butyl cellosolve7		*See* 2-Butoxyethanol				
tert-Butyl chromate (as CrO_3)	[1189-85-1]				C0,1	***Pc, RP***
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	***Pc, RP***
o-sec-Butylphenol	[89-72-5]	5	31			***Pc***
p-tert-Butyltoluene	[98-51-1]	1	6,1			
Cadmium elemental and compounds (as Cd)	[7440-43-9]		0,025			***C2,EM***
Calcium carbonate	[1317-65-3]		10			***Td, note 1***
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			***Td, note 1***
Calcium sulfate	[7778-18-9]		10 5			***Td, note 1*** ***Rd, note 1***
Camphor (synthetic)	[76-22-2]	2	12	3	19	
Caprolactam	[105-60-2]					
Dust			1		3	
Vapour		5	23	10	46	
Captafol	[2425-06-1]		0,1			***Pc***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Captan	[133-06-2]		5			
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	***Pc***
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	***Pc,C2,EM***
Carbon, fibres		*See* Fibres-Organic Synthetic Fibres				
Carbonyl chloride		*See* Phosgene				
Carbonyl fluoride	[353-50-4]	2	5,4	5	13	
Catechol	[120-80-9]	5	23			***Pc***
Cellosolve® acetate		*See* 2-Ethoxyethyl acetate				
Cellulose (paper fibres)	[9004-34-6]		10			***Td, note 1***
Ceramic (fibres)		*See* Fibres-Artificial Vitreous Mineral Fibres				
Cesium hydroxide	[21351-79-1]		2			
Chlordane	[57-74-9]		0,5			***Pc***
Chlorinated camphene	[8001-35-2]		0,5		1	***Pc,C3***
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	***RP***
2-Chloro-6-(trichloromethyl) pyridine		*See* Nitrapyrin				
Chloroacetaldehyde	[107-20-0]			C1	C3,2	***RP***
Chloroacetone	[78-95-5]			C1	C3,8	***Pc,RP***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
α-Chloroacetophenone	[532-27-4]	0,05	0,32			
Chloroacetyl chloride	[79-04-9]	0,05	0,23	0,15	0,69	***Pc***
Chlorobenzene	[108-90-7]	50	230			
o-Chlorobenzylidene malononitrile	[2698-41-1]			C0,05	C0,39	***Pc,RP***
Chlorobromomethane	[74-97-5]	200	1060			
2-Chloro-1,3-butadiene		*See* ß-Chloroprene				
Chlorodifluoromethane	[75-45-6]	1000	3540			
Chlorodiphenyl (42% chlorine)	[53469-21-9]		1			***Pc,C2,EM***
Chlorodiphenyl (54% chlorine)	[11097-69-1]		0,5			***Pc,C2,EM***
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			***C2,RP,EM***
Chloromethane		*See* Methyl chloride				
Chloromethyl methyl ether	[107-30-2]	Without applicable permissible exposure value				***C1,RP,EM***
bis (Chloromethyl) ether	[542-88-1]	0,001	0,0047			***C1,RP,EM***
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			
ß-Chloroprene	[126-99-8]	10	36			***Pc***
3-Chloropropene	[107-05-1]	1	3	2	6	
2-Chloropropionic acid	[598-78-7]	0,1	0,44			***Pc***
o-Chlorostyrene	[2039-87-4]	50	283	75	425	

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
o-Chlorotoluene	[95-49-8]	50	259			
Chlorpyrifos	[2921-88-2]		0,2			***Pc***
Chromite ore processing (chromate) (as Cr)			0,05			***C1,RP,EM***
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			***C1,RP,EM***
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				***C2,RP,EM***
Chrysotile		*See* Asbestos				
Clopidol	[2971-90-6]		10			
Coal dust (less than 5% crystalline silica)	[53570-85-7]		2			***Rd***
Coal dust (more than 5% crystalline silica)			0,1			***Rd, of quartz***
Coal tar pitch volatiles, as benzene solubles	[65996-93-2]		0,2			***C1,RP,EM***
Cobalt [7440-48-4], elemental, and inorganic compounds (as Co)			0,02			***C3***
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			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Corundum	[1302-74-5]		10			***Td, note 1***
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,RP***
Cyanogen	[460-19-5]	10	21			
Cyanogen chloride	[506-77-4]			C0,3	C0,75	***RP***
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			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Cyclohexylamine	[108-91-8]	10	41			
Cyclonite	[121-82-4]		1,5			***Pc***
Cyclopentadiene	[542-92-7]	75	203			
Cyclopentane	[287-92-3]	600	1720			
Cyhexatin	[13121-70-5]		5			
2,4-D	[94-75-7]		10			***C2,EM***
DDT (Dichlorodiphenyltrichloroethane)	[50-29-3]		1			***C3***
Decaborane	[17702-41-9]	0,05	0,25	0,15	0,75	***Pc***
Demeton®	[8065-48-3]	0,01	0,11			***Pc***
Di-sec-octyl phthalate	[117-81-7]		5		10	***C3***
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			***Pc***
Diazomethane	[334-88-3]	0,2	0,34			
Diborane	[19287-45-7]	0,1	0,11			
Dibromodifluoromethane		*See* Diflurodibromomethane				
1,2-Dibromoethane	[106-93-4]	20	155			***Pc,C2,RP,EM***
Dibrom®		*See* Naled				
Dibutyl phenyl phosphate	[2528-36-1]	0,3	3,5			***Pc***
Dibutyl phosphate	[107-66-4]	1	8,6	2	17	
Dibutyl phthalate	[84-74-2]		5			
2-N-Dibutylaminoethanol	[102-81-8]	2	14			***Pc***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
3,3'-Dichloro-4,4'-diamino-diphenylmethane		*See* 4,4'-Methylene bis (2-chloroaniline)				
1,3-Dichloro-5,5-dimethyl hydantoin	[118-52-5]		0,2		0,4	
Dichloroacetylene	[7572-29-4]			C0,1	C0,39	***RP***
o-Dichlorobenzene	[95-50-1]			C50	C301	***RP***
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***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
4,4'-Dicyclohexyl methane diisocyanate		*See* Methylene bis (4-cyclohexylisocyanate)				
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				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
N,N-Dimethylaniline	[121-69-7]	5	25	10	50	***Pc***
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			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Dursban®		*See* Chlorpyrifos				
Dust, inert or nuisance particulates		*See* Particulates Not Otherwise Classified (PNOC)				
Dyfonate®		*See* Fonofos				
Emery	[12415-34-8]		10			***Td, note 1***
Endosulfan	[115-29-7]		0,1			***Pc***
Endrin	[72-20-8]		0,1			***Pc***
Enflurane	[13838-16-9]	75	566			
Enzymes, proteolytic		*See* Subtilisins				
Epichlorohydrin	[106-89-8]	2	7,6			***Pc,C2,PR,EM***
EPN	[2104-64-5]		0,1			***Pc***
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			***Pc***
2-Ethoxyethanol (EGEE)	[110-80-5]	5	18			***Pc***
2-Ethoxyethyl acetate (EGEEA)	[111-15-9]	5	27			***Pc***
Ethyl acetate	[141-78-6]	400	1440			
Ethyl acrylate	[140-88-5]	5	20	15	61	***C3***
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			***Pc,C3***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Ethyl butyl ketone	[106-35-4]	50	234			
Ethyl chloride	[75-00-3]	1000	2640			
Ethyl ether		*See* Diethyl ether				
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,RP***
Ethylene dibromide		*See* 1,2-Dibromoethane				
Ethylene dichloride		*See* 1,2-Dichloroethane				
Ethylene glycol (vapour and mist)	[107-21-1]			C50	C127	***RP***
Ethylene glycol dinitrate	[628-96-6]			C0,2	C1,2	***Pc,RP***
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	***RP,EM***
N-Ethylmorpholine	[100-74-3]	5	24			***Pc***
Fenamiphos	[22224-92-6]		0,1			***Pc***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Fensulfothion	[115-90-2]		0,1			
Fenthion	[55-38-9]		0,2			***Pc***
Ferbam	[14484-64-1]		10			
Ferrovanadium (dust)	[12604-58-9]		1		3	
Fibres-Artificial Vitreous Mineral Fibres (note 4)						
Fibrous glass, continuous filament			10			***Td, note 1***
Fibrous glass, microfibres			1 fibre/cm³			
Insulation wool fibres, Glass wool			2 fibres/cm³			***C3***
Insulation wool fibres, Rock wool			1 fibre/cm³			***C2,EM***
Insulation wool fibres, Slag wool			1 fibre/cm³			***C2,EM***
Refractory fibres (ceramic or others)			1 fibre/cm³			***C3***
Fibres-Natural Mineral Fibres (note 4)						
Attapulgite	[12174-11-7]		1 fibre/cm³			***C1,EM***
Erionite	[66733-21-9]		Prohibited use			***C1***
Talc		*See* Talc (fibrous)				
Wollastonite	[13983-17-0]		10			***Td, note 1***
			5			***Rd, note 1***
Fibres-Organic Synthetic Fibres						
Carbon and graphite fibres			10			***Td, note 1***
			5			***Rd, note 1***
Para-aramides fibres (Kevlar®, Twaron®)			1 fibre/cm³			
Polyolefines fibres			10			***Td, note 1***
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			***Pc***
Formaldehyde	[50-00-0]			C2	C3	***C2,EM,RP***
Formamide	[75-12-7]	10	18			***Pc***
Formic acid	[64-18-6]	5	9,4	10	19	

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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				
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	***RP***
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				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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***
Heptachlor epoxide	[1024-57-3]		0,05			***Pc,C3***
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			***Pc,C3***
Hexachlorobutadiene	[87-68-3]	0,02	0,21			***Pc,C2,RP,EM***
Hexachlorocyclopentadiene	[77-47-4]	0,01	0,11			
Hexachloroethane	[67-72-1]	1	9,7			***Pc,C3***
Hexachloronaphthalene	[1335-87-1]		0,2			***Pc***
Hexafluoroacetone	[684-16-2]	0,1	0,68			***Pc***
Hexamethylphosphoramide	[680-31-9]	Without applicable permissible exposure value				***Pc,C2,RP,EM***
Hexamethylene diisocyanate	[822-06-0]	0,005	0,034			***EM,S***
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	***RP***
Hydrazine	[302-01-2]	0,1	0,13			***Pc,C2,RP,EM***
Hydrogen	[1333-74-0]	Simple asphyxiant				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Hydrogen bromide	[10035-10-6]			C3	C9,9	***RP***
Hydrogen chloride	[7647-01-0]			C5	C7,5	***RP***
Hydrogen cyanide	[74-90-8]			C10	C11	***Pc,RP***
Hydrogen fluoride (as F)	[7664-39-3]			C3	C2,6	***RP***
Hydrogen peroxide	[7722-84-1]	1	1,4			
Hydrogen selenide (as Se)	[7783-07-5]	0,05	0,16			
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	***RP***
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			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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	***RP***
Isophorone diisocyanate	[4098-71-9]	0,005	0,045			***EM,S***
Isopropoxyethanol	[109-59-1]	25	106			***Pc***
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			***Pc***
Isopropylbenzene		*See* Cumene				
Kaolin	[1332-58-7]		5			***Rd, note 1***
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			***C2,RP,EM***
Lead tetraethyl (as Pb)	[78-00-2]		0,05			***Pc***
Lead tetramethyl (as Pb)	[75-74-1]		0,05			***Pc***
Limestone		*See* Calcium carbonate				
Lindane	[58-89-9]		0,5			***Pc***
Lithium hydride	[7580-67-8]		0,025			
Magnesite	[546-93-0]		10			***Td, note 1***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Magnesium oxide fume (as Mg)	[1309-48-4]		10			
Malathion	[121-75-5]		10			***Pc***
Maleic anhydride	[108-31-6]	0,25	1,0			
Manganese (as Mn)	[7439-96-5]					
Dust and compounds			5			
Fume			1		3	
Manganese cyclopentadienyl tricarbonyl (as Mn)	[12079-65-1]		0,1			***Pc***
Manganese methyl cyclopentadienyl tricarbonyl (as Mn)	[12108-13-3]		0,2			***Pc***
Manganese tetroxide	[1317-35-7]		1			
Marble		*See* Calcium carbonate				
Mequinol		*See* 4-Methoxyphenol				
Mercury [7439-97-6], alkyl compounds (as Hg)			0,01		0,03	***Pc***
Mercury [7439-97-6], all forms except alkyl compounds (as Hg)						
Aryl and inorganic compounds			0,1			***Pc***
Mercury vapor			0,05			***Pc***
Mesityl oxide	[141-79-7]	10	40			
Methacrylic acid	[79-41-4]	20	70			
Methane	[74-82-8]	Simple asphyxiant				
Methanethiol		*See* Methyl mercaptan				
Methanol		*See* Methyl alcohol				
Methomyl	[16752-77-5]		2,5			
Methoxychlor	[72-43-5]		10			
2-Methoxyethanol (EGME)	[109-86-4]	5	16			***Pc***
2-Methoxyethyl acetate (EGMEA)	[110-49-6]	5	24			***Pc***
4-Methoxyphenol	[150-76-5]		5			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
1-Methoxy-2-propanol		*See* 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			***Pc***
Methyl alcohol	[67-56-1]	200	262	250	328	***Pc***
Methyl amyl alcohol	[108-11-2]	25	104	40	167	***Pc***
Methyl n-amyl ketone	[110-43-0]	50	233			
Methyl bromide	[74-83-9]	5	19			***Pc***
Methyl tert-butyl ether	[1634-04-4]	40	144			
Methyl n-butyl ketone	[591-78-6]	5	20			***Pc***
Methyl cellosolve®		*See* 2-Methoxyethanol				
Methyl cellosolve® acetate		*See* 2-Methoxyethyl acetate				
Methyl chloride	[74-87-3]	50	103	100	207	***Pc***
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			***Pc***
Methyl ethyl ketone (MEK)	[78-93-3]	50	150	100	300	
Methyl ethyl ketone peroxide	[1338-23-4]			C0,2	C1,5	***RP***
Methyl formate	[107-31-3]	100	246	150	368	
Methyl glycol		*See* 2-Methoxyethanol				
Methyl glycol acetate		*See* 2-Methoxyethyl acetate				
Methyl hydrazine	[60-34-4]			C0,2	C0,38	***Pc,C2,RP,EM***
Methyl iodide	[74-88-4]	2	12			***Pc,C2,EM***
Methyl isoamyl ketone	[110-12-3]	50	234			
Methyl isobutyl carbinol		*See* Methyl amyl alcohol				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Methyl isobutyl ketone	[108-10-1]	50	205	75	307	
Methyl isocyanate	[624-83-9]	0,02	0,047			***Pc***
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			***Pc***
Methyl propyl ketone	[107-87-9]	150	530			
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		*See* Ethyl amyl ketone				
N-Methyl-2,4,6-Trinitrophenyl nitramine		*See* Tetryl				
Metribuzin	[21087-64-9]		5			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Mevinphos®		*See* Phosdrin				
Mica	[12001-26-2]		3			***Rd, note 1***
Microfibres (fibrous glass)		*See* Fibres-Artificial Vitreous Mineral Fibres				
Mineral oil (mist)			5		10	
Mineral wool fibres		*See* Fibres-Artificial Vitreous Mineral Fibres				
Molybdenum (as Mo)	[7439-98-7]					
Insoluble compounds			10			
Soluble compounds			5			
Monocrotophos	[6923-22-4]		0,25			***Pc***
Morpholine	[110-91-8]	20	71			***Pc***
Naled (Dibrom®)	[300-76-5]		3			***Pc***
Naphtha		*See* VM&P Naphtha				
Naphthalene	[91-20-3]	10	52	15	79	
ß-Naphthylamine	[91-59-8]	Without applicable permissible exposure value				***C1,RP,EM***
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			***C1,RP,EM***
Nicotine	[54-11-5]		0,5			***Pc***
Nitrapyrin	[1929-82-4]		10		20	
Nitric acid	[7697-37-2]	2	5,2	4	10	
Nitric oxide		*See* Nitrogen monoxide				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
p-Nitroaniline	[100-01-6]		3			***Pc***
Nitrobenzene	[98-95-3]	1	5			***Pc***
p-Nitrochlorobenzene	[100-00-5]	0,1	0,64			***Pc***
4-Nitrodiphenyl	[92-93-3]	Without applicable permissible exposure value				***Pc,C1,RP,EM***
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			
Nitrogen trifluoride	[7783-54-2]	10	29			
Nitroglycerin (NG)	[55-63-0]			C0,2	C1,86	***Pc,RP***
Nitromethane	[75-52-5]	100	250			
1-Nitropropane	[108-03-2]	25	91			
2-Nitropropane	[79-46-9]	10	36			***C2,RP,EM***
N-Nitrosodimethylamine	[62-75-9]	Without applicable permissible exposure value				***Pc,C2,RP,EM***
Nitrotoluene (all isomers)	[88-72-2; 99-08-1; 99-99-0; 1321-12-6]	2	11			***Pc***
Nitrotrichloromethane		*See* Chloropicrin				
Nitrous oxide	[10024-97-2]	50	90			
Nonane	[111-84-2]	200	1050			
Nuisance particulates		*See* Particulates Not Otherwise Classified (PNOC)				
Octachloronaphthalene	[2234-13-1]		0,1		0,3	***Pc***
Octane	[111-65-9]	300	1400	375	1750	
Oil mist, mineral		*See* Mineral oil (mist)				
Osmium tetroxide (as Os)	[20816-12-0]	0,0002	0,0016	0,0006	0,0047	
Oxalic acid	[144-62-7]		1		2	

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Oxygen difluoride	[7783-41-7]			C0,05	C0,11	***RP***
Ozone	[10028-15-6]			C0,1	C0,2	***RP***
Para-aramides fibres		*See* Fibres-Organic Synthetic Fibres				
Paraffin wax, fume	[8002-74-2]		2			
Paraquat, respirable particulates	[4685-14-7]		0,1			
Parathion	[56-38-2]		0,1			***Pc***
Particulate polycyclic aromatic hydrocarbons (PPAH)		*See* Coal tar pitch volatiles				
Particulates Not Otherwise Classified (PNOC)			10			***Td, note 1***
Pentaborane	[19624-22-7]	0,005	0,013	0,015	0,039	
Pentachloronaphthalene	[1321-64-8]		0,5			***Pc***
Pentachloronitrobenzene	[82-68-8]		0,5			
Pentachlorophenol	[87-86-5]		0,5			***Pc,C2,RP,EM***
Pentaerythritol	[115-77-5]		10			
n-Pentane	[109-66-0]	120	350			
2-Pentanone		*See* Methyl propyl ketone				
3-Pentanone		*See* Diethyl ketone				
Perchloroethylene	[127-18-4]	25	170	100	685	***C3***
Perchloromethyl mercaptan	[594-42-3]	0,1	0,76			
Perchloryl fluoride	[7616-94-6]	3	13	6	25	
Perfluorodimethylcetone		*See* Hexafluoroacetone				
Perfluoroisobutylene	[382-21-8]			C0,01	C0,082	***RP***
Perlite	[83969-76-0]		10 5			***Td, note 1*** ***Rd, note 1***
Petroleum distillates		*See* Gasoline, Stoddard solvent, VM&P Naphtha				
Phenacyl chloride		*See* α-Chloroacetophenone				
Phenol	[108-95-2]	5	19			***Pc***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Phenothiazine	[92-84-2]		5			***Pc***
Phenyl ether, vapour	[101-84-8]	1	7	2	14	
Phenyl glycidyl ether (PGE)	[122-60-1]	1	6,1			***Pc,S,C3***
Phenyl mercaptan	[108-98-5]	0,5	2,3			
meta-Phenylenediamine	[108-45-2]		0,1			
ortho-Phenylenediamine	[95-54-5]		0,1			***C2,EM***
para-Phenylenediamine	[106-50-3]		0,1			***Pc,S***
Phenylethylene		*See* Styrene (monomer)				
Phenylhydrazine	[100-63-0]	0,1	0,44			***Pc,C2,RP,EM***
N-Phenyl-ß-naphthylamine	[135-88-6]	Without applicable permissible exposure value				***C2,RP,EM***
Phenylphosphine	[638-21-1]			C0,05	C0,23	***RP***
Phorate	[298-02-2]		0,05		0,2	***Pc***
Phosdrin	[7786-34-7]	0,01	0,092	0,03	0,27	***Pc***
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			***Pc***
Pindone	[83-26-1]		0,1			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Piperazine dihydrochloride	[142-64-3]		5			
Plaster of Paris	[26499-65-0]		10 5			***Td, note 1*** ***Rd, note 1***
Platinum Metal Soluble salts (as Pt)	[7440-06-4]		 1 0,002			
Polychlorobiphenyls		*See* Chlorodiphenyl				
Polyolefines fibres		*See* Fibres-Organic Synthetic Fibres				
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			***Td, note 1*** ***Rd, note 1***
Potassium hydroxide	[1310-58-3]				C2	***RP.EM***
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***
ß-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	

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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				
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			***Td, note 1***
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			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Sevin®		*See* Carbaryl				
Silane		*See* Silicon tetrahydride				
Silica - Amorphous, Diatomaceous earth (uncalcined)	[61790-53-2]		6			***Td, note 1***
Silica - Amorphous, fumes	[69012-64-2]		2			***Rd, note 1***
Silica - Amorphous, fused	[60676-86-0]		0,1			***Rd, note 1***
Silica - Amorphous, gel	[63231-67-4] **(112926-00-8)**		6			***Rd, note 1***
Silica - Amorphous, precipitated	[1343-98-2]		6			***Td, note 1***
Silica - Crystalline, Cristobalite	[14464-46-1]		0,05			***Rd***
Silica - Crystalline, Quartz	[14808-60-7]		0,1			***Rd,C2,EM***
Silica - Crystalline, Tridymite	[15468-32-3]		0,05			***Rd***
Silica - Crystalline, Tripoli	[1317-95-9]		0,1			***Rd***
Silicon	[7440-21-3]		10			***Td, note 1***
Silicon carbide (non fibrous)	[409-21-2]		10			***Td, note 1***
Silicon tetrahydride	[7803-62-5]	5	6,6			
Silver	[7440-22-4]					
Metal			0,1			
Soluble compounds (as Ag)			0,01			
Slag wool		*See* Fibres-Artificial Vitreous Mineral Fibres				
Soapstone	[14378-12-2]		6			***Td, note 1***
			3			***Rd, note 1***
Sodium azide	[26628-22-8]			C0,11	C0,3	***RP***
Sodium bisulfite	[7631-90-5]		5			
Sodium 2,4-dichlorophenoxyethyl sulfate		*See* Sesone				
Sodium fluoroacetate	[62-74-8]		0,05		0,15	***Pc***
Sodium hydroxide	[1310-73-2]				C2	***RP***
Sodium metabisulfite	[7681-57-4]		5			
Sodium tetraborate, anhydre	[1330-43-4]		1			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Sodium tetraborate, decahydrate or borax	[1303-96-4]		5			
Sodium tetraborate, pentahydrate	[12045-88-4]		1			
Starch	[9005-25-8]		10			***Td, note 1***
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	***Pc,C3***
Subtilisins [1395-21-7 ; 9014-01-1] (Proteolytic enzymes as 100% pure crystalline enzyme)					C0,00006	***RP***
Succinaldehyde	[638-37-9]	1	4			***Pc***
Sucrose	[57-50-1]		10			
Sulfometuron methyl	[74222-97-2]		5			
Sulfotep	[3689-24-5]		0,2			***Pc***
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	***RP***
Sulfur pentafluoride	[5714-22-7]			C0,01	C0,1	***RP***
Sulfur tetrafluoride	[7783-60-0]			C0,1	C0,44	***RP***
Sulfuric acid	[7664-93-9]		1		3	
Sulfuryl fluoride	[2699-79-8]	5	21	10	42	
Sulprofos	[35400-43-2]		1			
Systox		*See* Demeton7				
2,4,5-T	[93-76-5]		10			***C2,RP,EM***
Talc, fibrous (note 4)			1 fibre/cm³			***C1,EM***
Talc, non fibrous	[14807-96-6]		3			***Rd***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Tantalum [7440-25-7], metal and oxide dusts (as Ta)			5			
TEDP		*See* Sulfotep				
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			***Pc***
Terephthalic acid	[100-21-0]		10			
Terphenyls	[26140-60-3]			C0,5	C4,7	***RP***
1,1,2,2-Tetrabromoethane	[79-27-6]	1	14			
1,1,1,2-Tetrachloro-2,2-difluoroethane	[76-11-9]	500	4170			
1,1,2,2-Tetrachloro-1,2-difluoroethane	[76-12-0]	500	4170			
1,1,2,2-Tetrachloroethane	[79-34-5]	1	6,9			***Pc***
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			***Pc***
Tetranitromethane	[509-14-8]	0,005	0,04			***C2***
Tetrasodium pyrophosphate	[7722-88-5]		5			
Tetryl	[479-45-8]		1,5			
Thallium, elemental [7440-28-0], and soluble compounds (as Tl)			0,1			***Pc***
Thimet®		*See* Phorate				

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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			***Pc***
Thionyl chloride	[7719-09-7]			C1	C4,9	***RP***
Thiram®	[137-26-8]		5			
Tin	[7440-31-5]					
Metal			2			
Organic compounds (as Sn)			0,1		0,2	***Pc***
Oxide and inorganic compounds, except SnH_4 (as Sn)			2			
Titanium dioxide	[13463-67-7]		10			***Td, note 1***
o-Tolidine	[119-93-7]	Without applicable permissible exposure value				***Pc,C2,RP,EM***
Toluene	[108-88-3]	50	188			***Pc***
Toluene diisocyanate (TDI) (isomers mixture)	[26471-62-5]	0,005	0,036	0,02	0,14	***EM,S***
o-Toluidine	[95-53-4]	2	8,8			***Pc,C2,RP,EM***
m-Toluidine	[108-44-1]	2	8,8			***Pc***
p-Toluidine	[106-49-0]	2	8,8			***Pc,C2,EM***
Toxaphene		*See* Chlorinated camphene				
Tremolite		*See* Asbestos				
Tribromomethane		*See* Bromoform				
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	***RP***
1,1,2-Trichloroethane	[79-00-5]	10	55			***Pc***
1,1,1-Trichloroethane		*See* Methyl chloroform				
Trichloroethylene	[79-01-6]	50	269	200	1070	

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Trichlorofluoromethane	[75-69-4]			C1000	C5620	***RP***
Trichloromethane		*See* Chloroform				
Trichloronaphthalene	[1321-65-9]		5			***Pc***
Trichloronitromethane		*See* Chloropicrin				
2,4,5-Trichlorophenoxyacetic acid		*See* 2,4,5-T				
1,2,3-Trichloropropane	[96-18-4]	10	60			***Pc***
1,1,2-Trichloro-1,2,2-trifluoroethane	[76-13-1]	1000	7670	1250	9590	
Tri-o-cresyl phosphate	[78-30-8]		0,1			***Pc***
Tricyclohexyltin hydroxide		*See* Cyhexatin				
Tridymite		*See* Silica - Crystalline				
Triethanolamine	[102-71-6]		5			***S***
Triethylamine	[121-44-8]	5	20,5	15	61,5	***Pc***
Trifluorobromomethane		*See* Bromotrifluoromethane				
Trimellitic anhydride	[552-30-7]				C0,04	***S,RP***
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			

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
Uranium (natural) Insoluble compounds (as U) Soluble compounds (as U)	[7440-61-1]		0,2 0,05		0,6	
n-Valeraldehyde	[110-62-3]	50	176			
Vanadium pentoxide, fume and respirable dust (as V_2O_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***
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			***Td, note 1***
Wood dust hard and soft, except red cedar			5			***Td, note 1***
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	***Pc,RP***
Xylidine (mixed isomers)	[1300-73-8]	0,5	2,5			***Pc,C2,EM***

Substance	[#CAS]	TWAEV ppm	TWAEV mg/m³	STEV/Ceiling ppm	STEV/Ceiling mg/m³	Designation and remarks
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			***C1,RP,EM***
Zinc stearate	[557-05-1]		10			
Zinc, oxide	[1314-13-2]					
Dust			10			***Td, note 1***
Fume			5		10	
Zirconium [7440-67-7] and compounds (as Zr)			5		10	
Zoalene®		*See* Dinitolmide				

Part 2

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 an 8-hour 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 1 of this Schedule. The same applies when the worker performs his work at more than one work location for a period equal to or greater than 4 hours but less than 8 hours or a period greater than 8 hours but less than or equal to 16 hours.

For purposes of evaluating average daily exposure, the method of computation prescribed in the following formula is used:

Daily average exposure value:
(in mg/m³ or in ppm)

$$\frac{C_1T_1 + C_2t_2 + \ldots + C_nt_n}{t_1 + t_2 + \ldots + t_n}$$

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

$t_1 + t_2 + \ldots + t_n$ = 8 hours or the total period of the shift in hours, whichever applies

Part 3

DAILY EXPOSURE TO SEVERAL SUBSTANCES

Where two or more substances listed in Part 1 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:

$$Rm = \frac{C_1}{T_1} + \frac{C_2}{T_2} + \ldots + \frac{C_n}{T_n}$$

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 = depending on the case, the time-weighted average exposure value permited under part 1 of this schedule or the adjusted average exposure value established in accordance with the Guide to the adjustment of permissible exposure values for unusual work schedules, published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail, as it reads at the time it is applied

1, 2, 3, ... , n = indication of substances in the mixture

If ***Rm*** is greater than one, the time-weighted or adjusted average exposure value of the mixture of the substances is exceeded

Part 4

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 ß-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
74-84-0 Ethane
74-85-1 Ethylene
74-86-2 Acetylene
74-87-3 Methyl chloride
74-88-4 Methyl iodide
74-89-5 Methylamine
74-90-8 Hydrogen cyanide
74-93-1 Methyl mercaptan
74-96-4 Ethyl bromide
74-97-5 Chlorobromomethane
74-98-6 Propane
74-99-7 Methyl acetylene
75-00-3 Ethyl chloride
75-01-4 Vinyl chloride
75-04-7 Ethylamine
75-05-8 Acetonitrile
75-07-0 Acetaldehyde
75-08-1 Ethyl mercaptan
75-09-2 Methylene chloride
75-12-7 Formamide
75-15-0 Carbon disulfide
75-21-8 Ethylene oxide
75-25-2 Bromoform
75-31-0 Isopropylamine
75-34-3 1,1-Dichloroethane
75-35-4 1,1-Dichloroethylene
75-43-4 Dichlorofluoromethane
75-44-5 Phosgene
75-45-6 Chlorodifluoromethane
75-47-8 Iodoform
75-50-3 Trimethylamine
75-52-5 Nitromethane
75-55-8 Propylene imine
75-56-9 Propylene oxide
75-61-6 Difluorodibromomethane
75-63-8 Bromotrifluoromethane
75-65-0 tert-Butyl alcohol
75-69-4 Trichlorofluoromethane
75-71-8 Dichlorodifluoromethane
75-74-1 Lead tetramethyl
75-86-5 Acetone cyanohydrin
75-99-0 2,2-Dichloropropionic acid
76-03-9 Trichloroacetic acid
76-06-2 Chloropicrin
76-11-9 1,1,1,2-Tetrachloro-2,2-difluoroethane
76-12-0 1,1,2,2-Tetrachloro-1, 2-difluoroethane
76-13-1 1,1,2-Trichloro-1,2,2-trifluoroethane
76-14-2 1,2-Dichloro-1,1,2,2-tetrafluoroethane

76-15-3	Chloropentafluoroethane
76-22-2	Camphor (synthetic)
76-44-8	Heptachlor
77-47-4	Hexachlorocyclopentadiene
77-73-6	Dicyclopentadiene
77-78-1	Dimethyl sulfate
78-00-2	Lead tetraethyl
78-10-4	Ethyl silicate
78-30-8	Tri-o-cresyl phosphate
78-34-2	Dioxathion
78-59-1	Isophorone
78-83-1	Isobutyl alcohol
78-87-5	1,2-Dichloropropane
78-92-2	sec-Butyl alcohol
78-93-3	Methyl ethyl ketone (MEK)
78-95-5	Chloroacetone
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
79-04-9	Chloroacetyl chloride
79-06-1	Acrylamide
79-09-4	Propionic acid
79-10-7	Acrylic acid
79-20-9	Methyl acetate
79-24-3	Nitroethane
79-27-6	1,1,2,2-Tetrabromoethane
79-34-5	1,1,2,2-Tetrachloroethane
79-41-4	Methacrylic acid
79-44-7	Dimethyl carbamoyl chloride
79-46-9	2-Nitropropane
80-62-6	Methyl methacrylate (monomer)
81-81-2	Warfarin
82-68-8	Pentachloronitrobenzene
83-26-1	Pindone
83-79-4	Rotenone
84-66-2	Diethyl phthalate
84-74-2	Dibutyl phthalate
85-44-9	Phthalic anhydride
86-50-0	Azinphos-methyl
86-88-4	ANTU (α-Naphthylthiourea)
87-68-3	Hexachlorobutadiene
87-86-5	Pentachlorophenol
88-72-2	Nitrotoluene
88-89-1	Picric acid
89-72-5	o-sec-Butylphenol
90-04-0	o-Anisidine
91-20-3	Naphthalene
91-59-8	ß-Naphthylamine
91-94-1	3,3'-Dichlorobenzidine
92-52-4	Biphenyl
92-67-1	4-Aminodiphenyl
92-84-2	Phenothiazine
92-87-5	Benzidine (production)
92-93-3	4-Nitrodiphenyl
93-76-5	2,4,5-T
94-36-0	Benzoyl peroxide
94-75-7	2,4-D
95-13-6	Indene
95-47-6	Xylene
95-49-8	o-Chlorotoluene
95-50-1	o-Dichlorobenzene
95-53-4	o-Toluidine
95-54-5	ortho-Phenylenediamine
96-18-4	1,2,3-Trichloropropane
96-22-0	Diethyl ketone
96-33-3	Methyl acrylate
96-69-5	4,4'-Thiobis (6-tert-butyl-m-cresol)
97-77-8	Disulfiram
98-00-0	Furfuryl alcohol
98-01-1	Furfural
98-51-1	p-tert-Butyltoluene
98-82-8	Cumene
98-83-9	α-Methyl styrene
98-86-2	Acetophenone
98-95-3	Nitrobenzene
99-08-1	Nitrotoluene
99-65-0	Dinitrobenzene
99-99-0	Nitrotoluene
100-00-5	p-Nitrochlorobenzene
100-01-6	p-Nitroaniline
100-21-0	Terephthalic acid
100-25-4	Dinitrobenzene
100-37-8	2-Diethylaminoethanol
100-41-4	Ethyl benzene
100-42-5	Styrene (monomer)
100-44-7	Benzyl chloride
100-61-8	N-Methylaniline
100-63-0	Phenylhydrazine
100-74-3	N-Ethylmorpholine
101-14-4	4,4'-Methylene bis (2-chloroaniline) (MOCA)
101-68-8	Methylene bis (4-phenyl isocyanate) (MDI)
101-77-9	4,4'-Methylene dianiline
101-84-8	Phenyl ether, vapour
102-54-5	Dicyclopentadienyl iron
102-71-6	Triethanolamine
102-81-8	2-N-Dibutylaminoethanol
104-94-9	p-Anisidine
105-46-4	sec-Butyl acetate
105-60-2	Caprolactam
106-35-4	Ethyl butyl ketone
106-42-3	Xylene
106-46-7	p-Dichlorobenzene
106-49-0	p-Toluidine
106-50-3	p-Phenylenediamine
106-51-4	p-Benzoquinone
106-87-6	Vinyl cyclohexene dioxide
106-89-8	Epichlorohydrin
106-92-3	Allyl glycidyl ether (AGE)
106-93-4	1,2-Dibromoethane
106-97-8	Butane
106-99-0	1,3-Butadiene
107-02-8	Acrolein
107-05-1	3-Chloropropene

107-06-2	1,2-Dichloroethane
107-07-3	Ethylene chlorohydrin
107-13-1	Acrylonitrile
107-15-3	Ethylenediamine
107-18-6	Allyl alcohol
107-19-7	Propargyl alcohol
107-20-0	Chloroacetaldehyde
107-21-1	Ethylene glycol
107-30-2	Chloromethyl methyl ether
107-31-3	Methyl formate
107-41-5	Hexylene glycol
107-49-3	TEPP
107-66-4	Dibutyl phosphate
107-87-9	Methyl propyl ketone
107-98-2	Propylene glycol monomethyl ether
108-03-2	1-Nitropropane
108-05-4	Vinyl acetate
108-10-1	Methyl isobutyl ketone
108-11-2	Methyl amyl alcohol
108-18-9	Diisopropylamine
108-20-3	Diisopropyl ether
108-21-4	Isopropyl acetate
108-24-7	Acetic anhydride
108-31-6	Maleic anhydride
108-38-3	Xylene
108-44-1	m-Toluidine
108-45-2	meta-Phenylenediamine
108-46-3	Resorcinol
108-83-8	Diisobutyl ketone
108-84-9	sec-Hexyl acetate
108-87-2	Methylcyclohexane
108-88-3	Toluene
108-90-7	Chlorobenzene
108-91-8	Cyclohexylamine
108-93-0	Cyclohexanol
108-94-1	Cyclohexanone
108-95-2	Phenol
108-98-5	Phenyl mercaptan
109-59-1	Isopropoxyethanol
109-60-4	n-Propyl acetate
109-66-0	n-Pentane
109-73-9	n-Butylamine
109-79-5	Butyl mercaptan
109-86-4	2-Methoxyethanol (EGME)
109-87-5	Methylal
109-89-7	Diethylamine
109-94-4	Ethyl formate
109-99-9	Tetrahydrofuran
110-12-3	Methyl isoamyl ketone
110-19-0	Isobutyl acetate
110-43-0	Methyl n-amyl ketone
110-49-6	2-Methoxyethyl acetate (EGMEA)
110-54-3	n-Hexane
110-62-3	n-Valeraldehyde
110-80-5	2-Ethoxyethanol (EGEE)
110-82-7	Cyclohexane
110-83-8	Cyclohexene
110-86-1	Pyridine
110-91-8	Morpholine
111-15-9	2-Ethoxyethyl acetate (EGEEA)
111-30-8	Glutaraldehyde
111-40-0	Diethylene triamine
111-42-2	Diethanolamine
111-44-4	Dichloroethyl ether
111-65-9	Octane
111-69-3	Adiponitrile
111-76-2	2-Butoxyethanol
111-84-2	Nonane
114-26-1	Propoxur
115-07-1	Propylene
115-29-7	Endosulfan
115-77-5	Pentaerythritol
115-86-6	Triphenyl phosphate
115-90-2	Fensulfothion
117-81-7	Di-sec-octyl phthalate
118-52-5	1,3-Dichloro-5,5-dimethyl hydantoin
118-74-1	Hexachlorobenzene
118-96-7	2,4,6-Trinitrotoluene (TNT)
119-93-7	o-Tolidine
120-80-9	Catechol
120-82-1	1,2,4-Trichlorobenzene
121-44-8	Triethylamine
121-45-9	Trimethyl phosphite
121-69-7	N,N-Dimethylaniline
121-75-5	Malathion
121-82-4	Cyclonite
122-39-4	Diphenylamine
122-60-1	Phenyl glycidyl ether (PGE)
123-31-9	Hydroquinone
123-42-2	Diacetone alcohol
123-51-3	Isoamyl alcohol
123-86-4	n-Butyl acetate
123-91-1	Dioxane
123-92-2	Isoamyl acetate
124-04-9	Adipic acid
124-09-4	1,6-Diaminohexane
124-38-9	Carbon dioxide
124-40-3	Dimethylamine
126-73-8	Tributyl phosphate
126-98-7	Methylacrylonitrile
126-99-8	ß-Chloroprene
127-18-4	Perchloroethylene
127-19-5	N,N-Dimethylacetamide
128-37-0	2,6-Di-tert-butyl-p-cresol
131-11-3	Dimethylphthalate
133-06-2	Captan
135-88-6	N-Phenyl-ß-naphthylamine
136-78-7	Sesone
137-05-3	Methyl 2-cyanoacrylate
137-26-8	Thiram7
138-22-7	n-Butyl lactate
140-88-5	Ethyl acrylate

141-32-2	n-Butyl acrylate
141-43-5	2-Aminoethanol
141-66-2	Dicrotophos
141-78-6	Ethyl acetate
141-79-7	Mesityl oxide
142-64-3	Piperazine dihydrochloride
142-82-5	n-Heptane
144-62-7	Oxalic acid
148-01-6	Dinitolmide
150-76-5	4-Methoxyphenol
151-56-4	Ethylene imine
151-67-7	Halothane
156-62-7	Calcium cyanamide
205-99-2	Benzo(b)fluoranthene
218-01-9	Chrysene
231-36-7	Diquat
287-92-3	Cyclopentane
298-00-0	Methyl parathion
298-02-2	Phorate
298-04-4	Disulfoton
299-84-3	Ronnel
299-86-5	Crufomate7
300-76-5	Naled
302-01-2	Hydrazine
309-00-2	Aldrin
314-40-9	Bromacil
330-54-1	Diuron
333-41-5	Diazinon7
334-88-3	Diazomethane
353-50-4	Carbonyl fluoride
382-21-8	Perfluoroisobutylene
409-21-2	Silicon carbide (non fibrous)
420-04-2	Cyanamide
460-19-5	Cyanogen
463-51-4	Ketene
479-45-8	Tetryl
504-29-0	2-Aminopyridine
506-77-4	Cyanogen chloride
509-14-8	Tetranitromethane
528-29-0	Dinitrobenzene
532-27-4	α-Chloroacetophenone
534-52-1	Dinitro-ortho-cresol
540-59-0	1,2-Dichloroethylene
540-88-5	tert-Butyl acetate
541-85-5	Ethyl amyl ketone
542-75-6	Dichloropropene (cis and trans isomers)
542-88-1	bis (Chloromethyl) ether
542-92-7	Cyclopentadiene
546-93-0	Magnesite
552-30-7	Trimellitic anhydride
556-52-5	Glycidol
557-05-1	Zinc stearate
558-13-4	Carbon tetrabromide
563-12-2	Ethion
563-80-4	Methyl isopropyl ketone
583-60-8	o-Methylcyclohexanone
591-78-6	Methyl n-butyl ketone
593-60-2	Vinyl bromide
594-42-3	Perchloromethyl mercaptan
594-72-9	1,1-Dichloro-1-nitroethane
598-78-7	2-Chloropropionic acid
600-25-9	1-Chloro-1-nitropropane
603-34-9	Triphenyl amine
624-83-9	Methyl isocyanate
626-17-5	m-Phthalodinitrile
626-38-0	sec-Amyl acetate
627-13-4	n-Propyl nitrate
628-63-7	n-Amyl acetate
628-96-6	Ethylene glycol dinitrate
630-08-0	Carbon monoxide
638-21-1	Phenylphosphine
638-37-9	Succinaldehyde
680-31-9	Hexamethyl phosphoramide
681-84-5	Methyl silicate
684-16-2	Hexafluoroacetone
764-41-0	1,4-Dichloro-2-butene
768-52-5	N-Isopropylaniline
822-06-0	Hexamethylene diisocyanate
944-22-9	Fonofos
999-61-1	2-Hydroxypropyl acrylate
1024-57-3	Heptachlor epoxide
1120-71-4	Propane sultone
1189-85-1	tert-Butyl chromate
1300-73-8	Xylidine (mixed isomers)
1302-74-5	Corundum
1303-86-2	Boron oxide
1303-96-4	Sodium tetraborate, decahydrate
1304-82-1	Bismuth telluride Undoped
1305-62-0	Calcium hydroxide
1305-78-8	Calcium oxide
1309-37-1	Iron trioxide
1309-48-4	Magnesium oxide
1309-64-4	Antimony trioxide
1310-58-3	Potassium hydroxide
1310-73-2	Sodium hydroxide
1314-13-2	Zinc, oxide
1314-62-1	Vanadium pentoxide
1314-80-3	Phosphorus pentasulfide
1317-35-7	Manganese tetroxide
1317-65-3	Calcium carbonate
1317-95-9	Silica - Crystalline, Tripoli
1319-77-3	Cresol (all isomers)
1321-12-6	Nitrotoluene
1321-64-8	Pentachloronaphthalene
1321-65-9	Trichloronaphthalene
1321-74-0	Divinyl benzene
1327-53-3	Arsenic trioxide
1330-20-7	Xylene
1330-43-4	Sodium tetraborate, anhydrous
1332-58-7	Kaolin

1333-74-0	Hydrogen
1333-86-4	Carbon black
1335-87-1	Hexachloronaphthalene
1335-88-2	Tetrachloronaphthalene
1338-23-4	Methyl ethyl ketone peroxide
1343-98-2	Silica - Amorphous, precipitated
1344-28-1	Aluminum oxide
1344-95-2	Calcium silicate (synthetic)
1395-21-7	Subtilisin
1477-55-0	m-Xylene-α, α'-diamine
1563-66-2	Carbofuran
1634-04-4	Methyl tert-butyl ether
1912-24-9	Atrazine
1918-02-1	Picloram
1929-82-4	Nitrapyrin
2039-87-4	o-Chlorostyrene
2104-64-5	EPN
2179-59-1	Allyl propyl disulfide
2234-13-1	Octachloronaphthalene
2238-07-5	Diglycidyl ether (DGE)
2425-06-1	Captafol
2426-08-6	n-Butyl glycidyl ether (BGE)
2528-36-1	Dibutyl phenyl phosphate
2551-62-4	Sulfur hexafluoride
2698-41-1	o-Chlorobenzylidene malononitrile
2699-79-8	Sulfuryl fluoride
2921-88-2	Chlorpyrifos
2971-90-6	Clopidol
3333-52-6	Tetramethyl succinonitrile
3383-96-8	Temephos
3687-31-8	Lead arsenate
3689-24-5	Sulfotep
3825-26-1	Ammonium perfluorooctanoate
4016-14-2	Isopropyl glycidyl ether (IGE)
4098-71-9	Isophorone diisocyanate
4170-30-3	Crotonaldehyde
4685-14-7	Paraquat, respirable particulates
5124-30-1	Methylene bis (4-cyclohexylisocyanate)
5714-22-7	Sulfur pentafluoride
6423-43-4	Propylene glycol dinitrate
6923-22-4	Monocrotophos
7429-90-5	Aluminum
7439-92-1	Lead
7439-96-5	Manganese
7439-97-6	Mercury
7439-98-7	Molybdenum
7440-01-9	Neon
7440-02-0	Nickel
7440-06-4	Platinum
7440-16-6	Rhodium
7440-21-3	Silicon
7440-22-4	Silver
7440-25-7	Tantalum
7440-28-0	Thallium
7440-31-5	Tin
7440-33-7	Tungsten
7440-36-0	Antimony
7440-37-1	Argon
7440-38-2	Arsenic
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-47-3	Chromium
7440-48-4	Cobalt
7440-50-8	Copper
7440-58-6	Hafnium
7440-59-7	Helium
7440-61-1	Uranium
7440-65-5	Yttrium
7440-67-7	Zirconium
7440-74-6	Indium
7446-09-5	Sulfur dioxide
7553-56-2	Iodine
7572-29-4	Dichloroacetylene
7580-67-8	Lithium hydride
7616-94-6	Perchloryl fluoride
7631-90-5	Sodium bisulfite
7637-07-2	Boron trifluoride
7646-85-7	Zinc chloride
7647-01-0	Hydrogen chloride
7664-38-2	Phosphoric acid
7664-39-3	Hydrogen fluoride
7664-41-7	Ammonia
7664-93-9	Sulfuric acid
7681-57-4	Sodium metabisulfite
7697-37-2	Nitric acid
7719-09-7	Thionyl chloride
7719-12-2	Phosphorus trichloride
7722-84-1	Hydrogen peroxide
7722-88-5	Tetrasodium pyrophosphate
7723-14-0	Phosphorus (yellow)
7726-95-6	Bromine
7727-37-9	Nitrogen
7727-43-7	Barium sulfate
7758-97-6	Lead chromate
7773-06-0	Ammonium sulfamate
7778-18-9	Calcium sulfate
7782-41-4	Fluorine
7782-42-5	Graphite (natural)
7782-49-2	Selenium
7782-50-5	Chlorine
7782-65-2	Germanium tetrahydride
7783-06-4	Hydrogen sulfide
7783-07-5	Hydrogen selenide
7783-41-7	Oxygen difluoride
7783-54-2	Nitrogen trifluoride
7783-60-0	Sulfur tetrafluoride
7783-79-1	Selenium hexafluoride
7783-80-4	Tellurium hexafluoride
7784-42-1	Arsine

7786-34-7	Phosdrin
7789-30-2	Bromine pentafluoride
7790-91-2	Chlorine trifluoride
7803-51-2	Phosphine
7803-52-3	Stibine
7803-62-5	Silicon tetrahydride
8001-35-2	Chlorinated camphene
8002-74-2	Paraffin wax
8003-34-7	Pyrethrum
8006-61-9	Gasoline
8006-64-2	Turpentine
8022-00-2	Methyl demeton
8030-30-6	Rubber solvent (Naphtha)
8032-32-4	VM&P Naphtha
8050-09-7	Rosin
8052-41-3	Stoddard solvent
8052-42-4	Asphalt (petroleum)
8065-48-3	Demeton7
9002-84-0	Polytetrafluoroethylene
9004-34-6	Cellulose (paper fibres)
9005-25-8	Starch
9014-01-1	Subtilisin
10024-97-2	Nitrous oxide
10025-67-9	Sulfur monochloride
10025-87-3	Phosphorus oxychloride
10026-13-8	Phosphorus pentachloride
10028-15-6	Ozone
10035-10-6	Hydrogen bromide
10049-04-4	Chlorine dioxide
10102-43-9	Nitrogen monoxide
10102-44-0	Nitrogen dioxide
10210-68-1	Cobalt tetracarbonyl
10294-33-4	Boron tribromide
11097-69-1	Chlorodiphenyl (54% chlorine)
11103-86-9	Zinc chromate
12001-26-2	Mica
12001-28-4	Asbestos Crocidolite
12001-29-5	Asbestos Chrysotile
12045-88-4	Sodium tetraborate, pentahydrate
12079-65-1	Manganese cyclopentadienyl tricarbonyl
12108-13-3	Manganese methyl cyclopentadienyl tricarbonyl
12125-02-9	Ammonium chloride
12172-67-7	Asbestos Actinolite
12172-73-5	Asbestos Amosite
12174-11-7	Fibres-Natural Mineral Fibres Attapulgite
12415-34-8	Emery
12604-58-9	Ferrovanadium (dust)
13121-70-5	Cyhexatin
13397-24-5	Gypsum
13463-39-3	Nickel carbonyl
13463-40-6	Iron pentacarbonyl
13463-67-7	Titanium dioxide
13494-80-9	Tellurium
13530-65-9	Zinc chromate
13838-16-9	Enflurane
13983-17-0	Fibres-Natural Mineral Fibres Wollastonite
14378-12-2	Soapstone
14464-46-1	Silica - Crystalline, Cristobalite
14484-64-1	Ferbam
14567-73-8	Asbestos Tremolite
14807-96-6	Talc, non fibrous
14808-60-7	Silica - Crystalline, Quartz
14977-61-8	Chromyl chloride
15468-32-3	Silica - Crystalline, Tridymite
16219-75-3	Ethylidene norbornene
16752-77-5	Methomyl
16842-03-8	Cobalt hydrocarbonyl
17068-78-9	Asbestos Anthophyllite
17702-41-9	Decaborane
17804-35-2	Benomyl
19287-45-7	Diborane
19624-22-7	Pentaborane
20816-12-0	Osmium tetroxide
21087-64-9	Metribuzin
21351-79-1	Cesium hydroxide
22224-92-6	Fenamiphos
25013-15-4	Vinyl toluene
25154-54-4	Dinitrobenzene
25321-14-6	Dinitrotoluene
25551-13-7	Trimethyl benzene
25639-42-3	Methylcyclohexanol
26140-60-3	Terphenyls
26471-62-5	Toluene diisocyanate (TDI) (isomers mixture)
26499-65-0	Plaster of Paris
26628-22-8	Sodium azide
26952-21-6	Isooctyl alcohol
34590-94-8	Dipropylene glycol monomethyl ether
35400-43-2	Sulprofos
37300-23-5	Zinc chromate
53469-21-9	Chlorodiphenyl (42% chlorine)
53570-85-7	Coal dust (less than 5 % crystalline silica)
55720-99-5	Chlorinated diphenyl oxide
59355-75-8	Methyl acetylene-propadiene mixture (MAPP)
60676-86-0	Silica - Crystalline, fused
61788-32-7	Hydrogenated terphenyls
61790-53-2	Silica - Amorphous, Diatomaceous earth (uncalcined)
63231-67-4	Silica - Amorphous, gel
65996-93-2	Coal tar pitch volatiles, as benzene solubles
65997-15-1	Portland cement
66733-21-9	Fibres-Natural Mineral Fibres Erionite
68476-85-7	L.P.G. (Liquified petroleum gas)
68956-68-3	Vegetable oil
69012-64-2	Silica - Amorphous, fumes
74222-97-2	Sulfometuron methyl
83969-76-0	Perlite
112926-00-8	Silica - Amorphous, gel

SCHEDULE II
(s. 70)

LIST OF DANGEROUS SUBSTANCES BY CATEGORY

	Categories of dangerous substances				
Dangerous substances	inflammables and combustibles	oxidants	toxic	corrosives	dangerously reactive
Acetates, organic	x				
Acids, mineral (concentrated)				x	
Acids, organic	x				
Activated charcoal	x				
Air, compressed		x			
Alcohols	x				
Aldehydes	x				
Alkali metals	x				
Allyl compounds			x		
Amines	x				
Ammonium dichromate	x				
Ammonium nitrate					x
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		

Dangerous substances	inflammables and combustibles	oxidants	toxic	corrosives	dangerously reactive
Carbon black (lampblack)	x				
Castor oil	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				
Cresols			x		
Cyanides			x		x
Cyanogen compounds			x		
Ethers	x		x		
Feeds, various	x				
Fibres, vegetable (jute, kapok, sisal, etc)	x				
Fish scraps	x				
Fluorides, inorganic			x		
Fluorine		x			
Fluosulphonic acid			x		
Formaldehyde solution	x		x		
Fulminates					x
Fumigating substances, various	x		x		
Hydrazine					x
Hydrides	x				
Hydrocarbons	x				

Dangerous substances	inflammables and combustibles	oxidants	toxic	corrosives	dangerously reactive
Hydroxylamine	x				
Hypophosphites	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		
Linseed oil	x				
Lubricating oil	x				
Matches, strike-anywhere	x				
Menhaden oil	x				
Mercury compounds			x		
Metal powders (finely divided)	x				
Methyl cyanaformate					x
Methyl fluoroformate				x	
Neatsfoot oil	x				
Nitrates, inorganic		x			
Nitrites, inorganic		x			
Nitrogen chloride	x				
Nitrogen dioxide				x	
Oil : oiled clothing, fabrics, rags or silk soaked in	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				

Dangerous substances	inflammables and combustibles	oxidants	toxic	corrosives	dangerously reactive
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		
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				

Dangerous substances	inflammables and combustibles	oxidants	toxic	corrosives	dangerously reactive
Sulfides	x				
Tallow	x				
Tallow oil	x				
Tetraethyl lead	x				
Whale oil	x				
Woodwool	x				
Wool wadding	x				

SCHEDULE III
(s. 103)

MINIMUM RATE OF AIR CHANGE PER HOUR

Table 1
AVERAGE GENERAL VENTILATION

Classification of establishments	*Minimum rate of 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 (Beer breweries)	2
Wine manufacturing	2

Classification of establishments	*Minimum rate of air change per hour*
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
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 dying 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 plants	2
Sawmills	2
Veneer and plywood mills	2

Classification of establishments	*Minimum rate of air change per hour*
Sash, door and other millwood plants (excluding hardwood flooring manufacturing)	2
Coffin and casket industry	2
Wood processing 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
Metal products	
Metal fabricating industries	4
Miscellaneous machinery manufacturing	2
Electrical appliance manufacturing	2
Cell and battery manufacturing	4
Non-metallic products	
Cement industry	3
Lime industry	3
Gypsum products manufacturing	3
Concrete products manufacturing	2
Reinforced concrete industry	2
Clay products manufacturing (domestic clay)	2
Refractory products manufacturing	4
Stone products manufacturing	4
Asbestos products manufacturing	6
Glass and glass products manufacturing	4
Abrasive industry	4
Chemicals	
Explosives and ammunition manufacturing	3
Mixed fertilizers manufacturing	2
Plastics and synthetic resins industry	3

Classification of establishments	*Minimum rate of air change per hour*
Pharmaceuticals and medical products industry	2
Paints and varnish industry	4
Maintenance products manufacturing	3
Industrial chemical products manufacturing	2
Warehouses : See Table III of this Schedule.	
Any other class of establishment not appearing in this Table or in Table II of this Schedule	1

The number of air changes per hour listed in this Table may be converted into cfm/ft2 by using the following formula :

$$\frac{ft^3/min.}{ft^2} = \frac{\text{Air change/hour}}{60 \text{ min./hour}} \times [12ft + \text{height of work level in feet (ref. main floor)}]$$

or to $m^3/h/m^2$ by using the following formula :

$$\frac{m^3/h}{m^2} = \text{Air change/hour} \times [3{,}6m. + \text{height of work level in metres (ref. main floor)}]$$

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, dusts or are mists 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 total ventilation air and 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 3

VENTILATION IN WAREHOUSES WHERE INTERNAL COMBUSTION VEHICLES ARE OPERATED

The ventilation rate per vehicle must be computed as follows :

$$\mathbf{Q = K \times (U/50\%) \times (P/45kW) \times [2 - (V/4250m^3)]}$$

where:

Q = air flow in m^3/h prescribed per vehicle

K = ventilation constant, namely 8 500 m^3/h per propane or diesel-powered vehicle, 13 500 m^3/h per gas-powered vehicle

P = power of the engine in kilowatts

V = volume of space available in m^3 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:

$$\mathbf{Q = K \times [2 - (V/4250 m^3)]}$$

2) for the purposes of applying 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 m^3, the formula does not apply and the minimum air supply is 8 500 m^3/h per propane or diesel-powered vehicle and 13 500 m^3/h per gas-powered vehicle.

SCHEDULE IV
(s. 117)

STANDARDS OF TEMPERATURE IN ESTABLISHMENTS

Nature of work performed	*Minimum temperature required*
light work performed while sitting, especially mental work, precision work, or which requires 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, especially 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. 121, 122, 123 and 124)

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.

Exposure to temperatures in excess of those in Table 1 is permitted under 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.

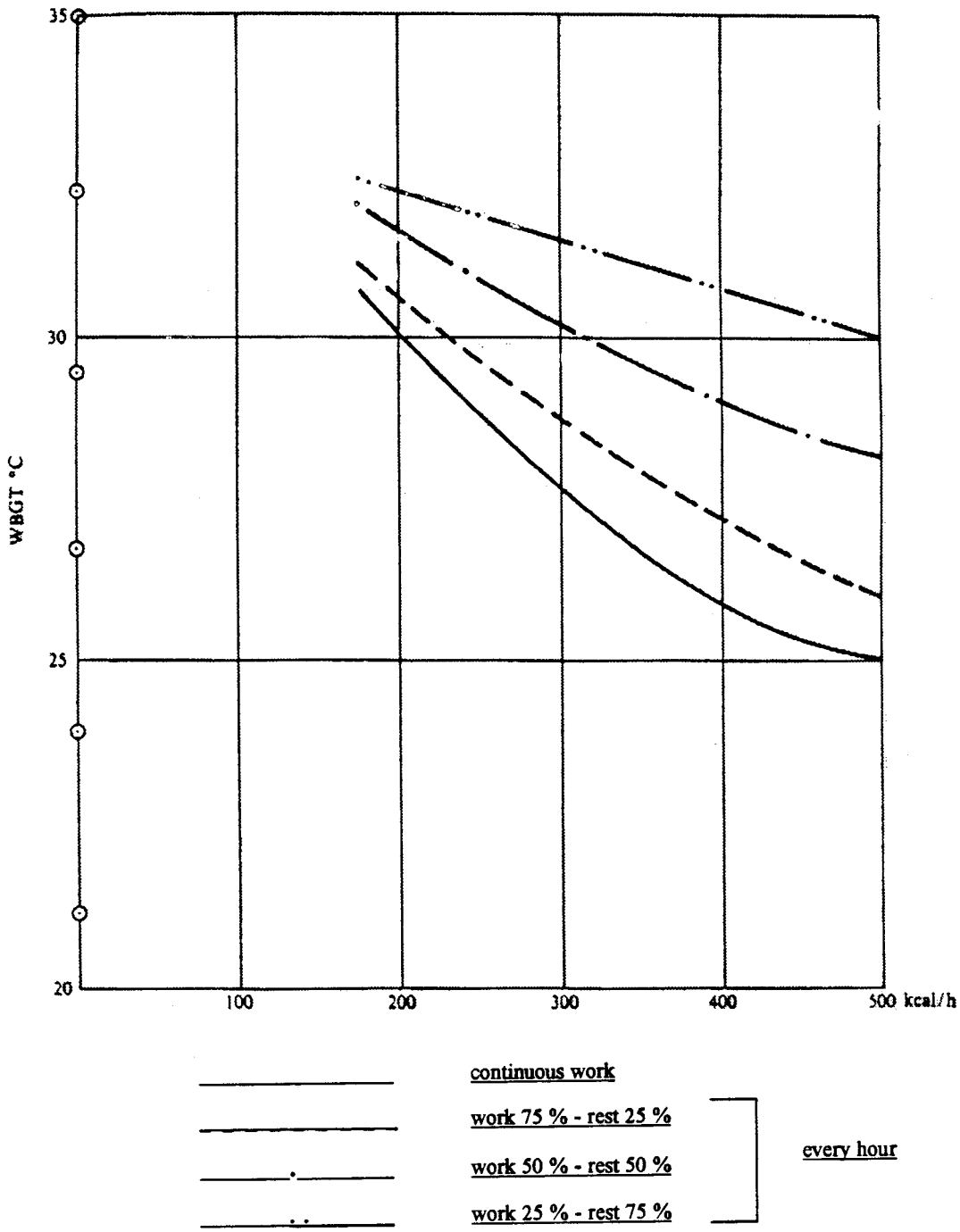
Table 1

PERMISSIBLE HEAT EXPOSURE LIMIT VALUES, IN °C (WBGT °C (WBGT)

Alternate Regimen work/rest	Work load		
	light work	moderate work	heavy work
Continuous work	30,0	26,7	25,0
Work 75%, rest 25% (every hour)	30,6	28,0	25,9
Work 50%, rest 50% (every hour)	31,4	29,4	27,9
Work 25%, rest 75% (every hour)	32,2	31,1	30,0

Chart

PERMISSIBLE HEAT EXPOSURE VALUES



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 ± 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 to +100°C: accuracy: ± 0,5°C) must be set at 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 classified 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 assigned to a particular category by measuring the metabolism of the man at work, namely by estimating his metabolism using the following Table 2:

Table 2

ASSESSMENT OF WORK LOAD AND 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 of 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 both arms	filing metal, planning wood, raking a garden
Moderate work using both arms	cleaning a floor, beating a carpet
Heavy work using the body	railroad track laying, digging, barking trees
railroad track laying, digging, barking trees	

C. Basal metabolism : 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, Heinemenn 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. Limits applicable to continuous work correspond to the following conditions: a 5-day week, an 8-hour working day with a short pause (about a half-hour) for a meal. 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:

$$M_{moyen} = \frac{(M_1) \times (t_1) + (M_2) \times (t_2) + \ldots (M_n) \times (t_n)}{(t_1) + (t_2) + \ldots (t_n)}$$

where M_1, M_2 and M_n are estimated metabolic rates for each of the worker's work locations for the entire 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:

$$WBGT_{moyen} = \frac{(WBGT_1) \times (t_1) + (WBGT_2) \times (t_2) + \ldots (WBGT_n) \times (t_n)}{(t_1) + (t_2) + \ldots (t_n)}$$

where $WBGT_1$, $WBGT_2$, $WBGT_n$ represent values calculated in WBGT for various tasks at rest and work stations occupied during all time periods and t_1, t_2, t_n constitute the time in minutes spent at each rest and work station.

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. $t_1 + t_2 + ,,, t_n = 60$ minutes. Where exposure is intermittent, the time-weighted average values must be computed as two-hour time-weighted averages, i.e. $t_1 + t_2 + \ldots t_n = 120$ 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. 125)

ILLUMINATION LEVELS IN ESTABLISHMENTS

Nature of work	*Examples of corresponding task*	*Minimum illumination level in 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
	Rapid general inspection, studios, study rooms, typing, reading, machine sewing, assembly of average parts, special office work	550
Difficult detail perception	Repairs, difficult inspection, lathes, hand sewing, embroidery	800

SCHEDULE VII
(s. 133)

MEASURING METHOD OF 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 then modified spectrum by following the method for adding decibels;

e) the result thus obtained is expressed in corrected dBA.

SCHEDULE VIII
(s. 145)

DAILY QUANTITY OF DRINKING WATER REQUIRED BY WORKERS

Destination	**Characteristics**	**Daily quantity by worker in litres**
Offices		55
Camps	Permanent	190
	Temporary	95
Schools		55
Factory	Without shower	55
	With shower	130
Plant or factory	Without shower	55
	With shower	130

SCHEDULE IX
(s. 161)

SANITARY FACILITIES

Occupancy	**W.C.**		**Urinals**	**Lavatories**		**Tubs or showers**	**Other fixtures**	**Notes**
	men	**women**		**men**	**women**			
Arenas Players Spectators	1/30 players 1/600 men	3/600 women	1/30 players 2/600 men	1/30 players 2/600 men	2/600 women	1/10 players		
Brasseries	1/40 Customers	1/90 Customers	See *(a)*	1/80 Customers	1/80 Customers			
Physicians, dentists and other health practitioners offices	1			2 See *(b)*				

Occupancy	W.C.		Urinals	Lavatories		Tubs or showers	Other fixtures	Notes
	men	women		men	women			
Cinemas, theatres, auditoriums, exhibition and convention halls...								
1 to 100 persons	1	1		1	1		one service	
101 to 200 persons	2	2		1	1		tub	
201 to 400 persons	3	3	See *(e)*	2	2			
401 to 750 persons	add 1/600 persons	add 1/600 persons		3	3			
751 or more				add 1/1000 persons	add 1/1000 persons			
Employees: See *(d)*								
Medical clinics	1/floor	1/floor		1/floor	1/floor			
Bars (holding a liquor permit)								
Customers:	1/25 men	1/30 women	See *(e)*	1/50 men	1/60 women			
Employees: See *(d)*								
Dormitories, boarding houses for children							one tub per 50 persons;	
1 to 150 persons	1/10 men	1/8 women	1/25 men	1/12 men	1/12 women	See *(f)* 1/8 persons	a sink or service tub	
151 persons or more	add 1/10 men	add 1/8 women	add 1/50 men	add 1/12 men	add 1/12 women	add 1/20 persons	per 100 persons	
Schools							one service	
Primary	1/40 boys	1/35 girls	1/30 boys	1/50 boys	1/50 girls	See *(g)* 1/5 pupils	tub 1/floor	
Other	1/75 boys	1/75 girls	1/30 boys	1/50 boys	1/50 girls	1/5 pupils	1/floor	
Teachers: See *(d)*								
Office buildings (See *h)*								
1 to 15 employees of each gender	1	1		1	1		One service	
16 to 35 employees of each gender	2	2	See *(e)*	2	2		sink or tub	
36 to 60 employees of each gender	3	3		2	2		per floor	
61 to 80 employees of each gender	4	4		3	3			
81 to 90 employees of each gender	5	5		3	3			
91-110 employees of each gender	5	5		4	4			
111-125 employees of each gender	6	6		4	4			
126 and + 75 employees of each gender	add 1/50 men	add 1/50 women		add 1/60 men	add 1/60 women			
Churches, chapels, places of worship	1/300 men	1/150 women	1/300 men	1/300 men	1/300 women			
Sentry-boxes, shelters, temporary buildings, See *(i)*	1			1				

Occupancy	W.C. men	W.C. women	Urinals	Lavatories men	Lavatories women	Tubs or showers	Other fixtures	Notes
Hospitals (hospital centres)								
1) Private room	1			1		1	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	
2) Communal room	1/8 patients			1/8 patients		1/20 patients		
3) Waiting room	1			1				
Employees: See *(d)*								
Hotel - Motel	See *(j)*			See *(k)*				
1) Private room	1/room			1/room		1/room		
2) Room with common bathroom								
1 to 4 rooms/floor								
5 to 8 rooms/floor	1/floor			1/floor		1/floor		
9 rooms or more/floor	1/floor add 1/8 rooms	1/floor add 1/8 rooms		1/floor add 1/8 rooms	1/floor add 1/8 rooms	1/gender add 1/8 rooms		
Professional care institutes, personal care institutes, beauty salon, hairstylist, barber	1	1		1	1	1 shower		
				1/care unit		See (l)		
Apartments							1 sink per	
1 to 7 units	1/apartment			1/apartment		1 tub per apartment	apartment See *(m)*	
8 units or more	1/apartment			1/apartment		1 tub per apartment	1 sink per apartment See *(n)*	
Stores								
a) Retail (See *o)*	1			1			See *(p)*	
b) Department Stores, Shopping Centres								
1) Customers	1/300 men	1/300 women	See (e)	1/300 men	1/300 women		See *(p)*	
2) Employees: See *(d) (q)*								
Rooming house (tourist, furnished, boarding, homes.)	See *(j)*			See *(k)*		See *(r)*		
	1/10 rooms	1/10 rooms		1/10 rooms	1/10 rooms	2/10 rooms		
Pools							See *(s)*	
1) Indoors	1/60 men	1/40 women	1/60 men	1/100 men	1/100 women	1/40 swimmers		
2) Outdoors	1/120 men	1/80 women	1/120 men	2/600 men	1/300 women	1/80 swimmers	1 Foot Bath	
3) spectators	1/600 men	3/600 women	2/600 men		2/600 women			
Jails, prisons								
1) Inmates: See *(c)*								
2) Employees: See *(d)*								

Occupancy	W.C.		Urinals	Lavatories		Tubs or showers	Other fixtures	Notes
	men	women		men	women			
Restaurants								
1 to 25 Customers	1	See *(t)*		1	See *(t)*			
26 to 50 Customers	1 see *(t)*	1 see *(t)*		1 see *(t)*	1 see *(t)*			
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 1/50 men	add 1/50 women		add 1/50 men	add 1/50 women			
Employees: See *(d)* and *(u)*								
Reception rooms, meeting halls... (holding a liquor permit)			See (a)					
Customers	1/30 men	1/30 women		1/60 men	1/60 women		A tub or a service sink	
Funeral Homes	1	1		1	1		A service sink and a floor drain in the embalming room	
Service stations, gas bars (See *v*)	1	1		1	1			
Any other establishment (plants, warehouses, workshops, laundries, foundries, etc.)						See *(w)*		
See (h)				1	1			
1 to 10 employees of each gender	1	1		add	add			
11 to 25 employees of each gender	2	2	1	1/10	1/10			
26 to 50 employees of each gender	3	3	2	men	women			
51 to 75 employees of each gender	4	4	2					
76 to 100 employees of each gender	5	5	3		add			
101 or more of each gender	add 1/50 men	add 1/50 women	add 1/90 men	add 1/15 men	1/15 women			

(a) 2/3 of men W.C. may be replaced by urinals.
(b) A sink shall be installed in the examination room in addition to the one in the toilet room.
(c) According to the requirements of authorities.
(d) Sanitary accommodations for employees shall be the same as those required for office buildings.
(e) For men, half the compulsory W.C. may be replaced by urinals.
(f) In a women's dormitory, a bathtub shall be added in a proportion of 1/30.
(g) In the gymnasium and according to the largest group that uses it.
(h) Only one toilet room is required for 10 employees or less of both genders.
(i) One W.C. and a lavatory shall be installed, except if written permission is given to use an existing washroom within a maximum radius of 30 metres.
(j) Toilet facilities for general use shall be separate from bathrooms and lavatories.
(k) One lavatory is required for each room not equipped with a private toilet.
(l) One shower for each similar massage, physiotherapy or health treatment unit.
(m) One laundry tray per apartment or one connection for an automatic clothes washer).

(n) One double basin laundry tray or one automatic clothes washer per ten apartments; one automatic washing machine per 20 apartments.
(o) Several stores may use a common washroom provided it is accessible via an indoor passageway.
(p) A tub or sink must be installed in a food store. In dog kennels and pet shops, a tub or a service sink and a floor drain must be installed.
(q) Fixtures for employees may be situated in the customers' washrooms.
(r) In a home for the elderly, tubs must be installed in a proportion of 1 unit per 10 persons.
(s) 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. The floor plan for rooms must be arranged so that swimmers may go through the toilet area to get to the showers.
(t) 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 genders with access from the outside are required.
(u) Toilet facilities are not required for fewer than 5 employees.
(v) Separate rooms for both genders with access to the outside are compulsory.
(w) A shower is compulsory per 15 employees exposed to excessive heat or to skin contact with corrosive, noxious, irritating or infectious.

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Gouvernement du Québec

O.C. 886-2001, 4 July 2001

Building Act
(R.S.Q., c. B-1.1)

Corporation des maîtres électriciens du Québec and the Corporation des maîtres mécaniciens en tuyauterie du Québec
— Mandate entrusted

Regulation respecting the mandate entrusted to the Corporation des maîtres électriciens du Québec and the Corporation des maîtres mécaniciens en tuyauterie du Québec

WHEREAS under subparagraph 6.1 of the first paragraph of section 182 of the Building Act (R.S.Q., c. B-1.1), the Government may, by regulation, determine a procedure for the apportionment, between the Régie du bâtiment du Québec and the mandatary Corporation referred to in section 129.3 of the Act, of the dues and fees payable by a contractor for an application for the issue or alteration of a licence, for the renewal of the licence, for an examination or any other means of evaluation and for the review of a ruling that pertains to the issue, alteration, suspension or cancellation of a licence;

WHEREAS under subparagraph 6.2 of the first paragraph of section 182 of the Act the Government may also, by regulation, determine the administrative and financial procedures applicable to the Régie du bâtiment du Québec and to the mandatary Corporation for the management, administration, transfer and updating of the records of a contractor holding licences;

WHEREAS in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1), a draft Regulation attached to this Order in Council was published in Part 2 of the *Gazette officielle du Québec* of 3 January 2001 with a notice that it could be made by the Government upon the expiry of 45 days following that publication;

WHEREAS the 45-day period has expired;

WHEREAS it is expedient to make the Regulation with amendments;

IT IS ORDERED, therefore, upon the recommendation of the Minister of State for Labour and Employment and Minister of Labour:

THAT the Regulation respecting the mandate entrusted to the Corporation des maîtres électriciens du Québec and to the Corporation des maîtres mécaniciens en tuyauterie du Québec, attached to this Order in Council, be made.

JEAN ST-GELAIS,
Clerk of the Conseil exécutif