GNR.2281 of 16 October 1987: Environmental regulations for workplaces

as amended by

Notice	*Government Gazette*	Date
R.1754		18 August 1989
R.489		18 March 1994
R.307	24967	7 March 2003

The Minister of Manpower has, in terms of section 35

Repealed Act ×

Act 6 of 1983 has been repealed by s 49 of Act 85 of 1993

of the Machinery and Occupational Safety Act, 1983 (Act No. 6 of 1983

Repealed Act ×

Act 6 of 1983 has been repealed by s 49 of Act 85 of 1993

), made the regulations contained in the Schedule hereto.

SCHEDULE

ARRANGEMENT OF REGULATIONS

1. Definitions.—In these regulations 'the Act' means the Machinery and Occupational Safety Act, 1983 (Act 6 of 1983

Repealed Act ×

Act 6 of 1983 has been repealed by s 49 of Act 85 of 1993

), and any expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context indicates otherwise—

"acclimatised" means physiologically adapted to a particular thermal environment and work rate;

"attenuation" means the proven capability of hearing protectors to reduce the equivalent noise level to which the wearer thereof is exposed;

"building work" means the work defined as such in regulation 1 of the General Administrative Regulations promulgated in terms of section 35 of the Act and published under Government Notice R.2206 of 5 October 1984;

"dB (A)" means a unit of measurement of sound pressure level as contemplated in SABS 083;

"directional luminaire" means a luminaire from which the light radiation is confined to a well-defined narrow beam;

"equivalent sound pressure level" is the value of the equivalent continuous sound level which would deliver the same amount of sound energy as the actual fluctuating sound, measured over the same time period, and 'equivalent noise level' has a corresponding meaning;

[Definition of "equivalent noise level" substituted by definition of "equivalent sound pressure level" by GN R489 of 1994.]

"exposed" means exposed whilst at work, and **"exposure"** has a corresponding meaning;

[Definition of "exposed" inserted by GN R489 of 1994.]

"exposure limit" means a value as defined in the Asbestos Regulations, 1987, promulgated in terms of section 35 of the Act and published under Government Notice R.773 of 10 April 1987;

"hearing protectors" means ear muffs or ear plugs of a type approved by the chief inspector and in respect of which an efficiency test as prescribed by SABS 572 has been conducted by the South African Bureau of Standards or an approved inspection authority;

"heatstroke" means a pathological condition arising from thermoregulatory failure of the human body;

"illuminance" means the intensity of light falling on a surface, measured in lux;

"luminaire" means light fitting which supports a lamp and provides it with electrical connections;

"noise zone" means an area where the equivalent noise level is equal to or exceeds 85 dB (A) when measured in accordance with SABS 083;

"regional director" means the regional director as defined in regulation 1 of the General Administrative Regulations published under Government Notice No. R.2206 of 5 October 1984 and amended by Government Notice No. R.2131 of 1990;

[Definition of "regional director" inserted by GN R489 of 1994.]

"respiratory protective equipment" means a device as defined in the Asbestos Regulations, 987, promulgated in terms of section 35 of the Act and published under Government Notice R.773 of 10 April 1987;

"SABS 083" means the South African Bureau of Standards' Code of Practice for the Measurement and Assessment of Occupational Noise for Hearing Conservation Purposes, SABS 083;

"SABS 572" . . . . . .

[Definition of "SABS 572" deleted by GN R489 of 1994.]

"SABS 1451: Part I" South African Standard. Standard Specification for Hearing Protectors, Part I: Ear muffs;

[Definition of "SABS 1451: Part I" inserted by GN R489 of 1994.]

"SABS 1451: Part II" South African Standard. Standard Specification for Hearing Protectors, Part II: Ear plugs;

[Definition of "SABS 1451: Part II" inserted by GN R489 of 1994.]

"time-weighted average" means the average of a number of representative measurements that are taken over a period of time and that are calculated as follows:

where x_1, x_2, etc., are the observed measurements during the corresponding periods t_1, t_2, etc., minutes, and $t_1 + t_2 + t_3 ;+ \ldots + t_n$ is the total time in minutes over which the measurements are taken;

"WBGT index" means a number which characterises the thermal conditions in the environment to which that number applies; it is calculated by adding seven tenths of the reading in degrees Celsius obtained with a naturally ventilated wet-bulb thermometer to one fifth of the reading in degrees Celsius obtained with a globe thermometer and adding that sum to one tenth of the reading in degrees Celsius obtained with a dry-bulb thermometer; the index may also be obtained by using an electronically integrating direct-reading instrument which has been designed, built and calibrated for that particular purpose;

"working plane" means a horizontal plane at the level where work is performed.

2. Thermal Requirements.—(1) Subject to the provisions of subregulation (2), no employer shall require or permit an employee to work in an environment in which the time-weighted average dry-bulb temperature taken over a period of four hours is less than 6°C, unless the employer takes reasonable measures to protect such employee against the cold and further takes all precautions necessary for the safety of such employee: Provided that, where outdoor work is performed, the employer shall take such measures and such precautions in an environment in which the actual dry-bulb temperature is less than 6°C at any time.

[Sub-r. (1) substituted by GN R1754 of 1989.]

(2) No employer shall require or permit an employee to work in a refrigerated environment in which the actual dry-bulb temperature is below 0°C unless—

(*a*)

the maximum exposure of the employee does not exceed the periods as indicated in the following table:

Temperature (Celsius)	*Maximum exposure*
0 to –18 degrees	No limit.
Lower than –18 but not lower than –34 degrees	Maximum continuous exposure during each hour: 50 minutes. After every exposure in a low-temperature area at least 10 minutes must be spent, under supervision, in a comfortably warm environment.
Lower than –34 but not lower than –57 degrees	Two periods of 30 minutes each, at least 4 hours apart. Total low-temperature exposure: 1 hour per day.
Lower than –57 degrees	Maximum permissible exposure: 5 minutes during any 8-hour period.

(*b*)

the employee is provided with the following protective clothing:

(i)
A nylon freezer suit or equivalent and, where the said temperature is below −34°C, such suit or equivalent shall be of double layer;

(ii)
a woollen Balaclava or equivalent;

(iii)
fur-lined leather gloves or equivalent;

(iv)
waterproof outer gloves with knitted woollen or equivalent inners as well as a waterproof apron where wet or thawing substances are handled;

(v)
woollen socks; and

(vi)
waterproof industrial boots or equivalent:

Provided that an employee who works in a low-temperature area in which the temperature is not lower than −18°C for periods not exceeding five minutes in every hour need only be provided with an ordinary overall, gloves and shoes, or equivalent;

(*c*)
the employee is, beforehand and thereafter, at intervals not exceeding one year, certified fit to work in such environment by a registered medical practitioner or a registered nurse according to a protocol prescribed by such practitioner, and such employee is issued with a certificate to that effect; and

(*d*)
all the clothing worn by the employee is dry prior to entering the low-temperature area.

(3) Where hand-held tools which vibrate at a frequency of vibration of less than 1 000 Hz are used at an actual dry-bulb temperature below 6°C, the employer shall provide an employee operating such tools with lined gloves, and ensure that he wears them.

(4) Where the time-weighted average WBGT index, determined over a period of one hour, exceeds 30 in the environment in which an employee works, the employer of such employee shall—

(*a*)
if practicable, take steps to reduce the said index to below 30; or

(*b*)
where it is not practicable to reduce the said index to below 30 and where hard manual labour is performed—

(i)
have every such employee beforehand and thereafter, at intervals not exceeding one year, certified fit to work in such environment by a registered medical practitioner or a registered nurse according to a protocol prescribed by such practitioner, and every such employee shall, if found fit to work in such environment, be issued with a certificate to that effect by such practitioner or nurse;

(ii)
ensure that every such employee is acclimatised to such working environment before he is required or permitted to work in such environment;

(iii) inform every such employee of the need to partake of at least 600 millilitres of water every hour;

(iv) train every such employee in the precautions to be taken to avoid heatstroke; and

(v) provide the means whereby every such employee can receive prompt first-aid treatment in the event of heatstroke:

Provided that, where the question arises as to whether any particular type of work does in fact constitute hard manual labour, the decision of an inspector shall be decisive.

3. Lighting.—(1) Every employer shall cause every workplace in his undertaking to be lighted in accordance with the illuminance values specified in the Schedule to these regulations: Provided that where specialised lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialised lighting is available to and is used by such employees.

(2) The chief inspector may, by notice in the *Gazette*, from time to time modify the Schedule to these regulations as he deems necessary.

(3) With respect to the lighting to be provided in terms of subregulation (1), the employers shall ensure that—

(*a*) the average illuminance at any floor level in a workplace within five metres of a task is not less than one fifth of the average illuminance on that task;

(*b*) glare in any workplace is reduced to a level that does not impair vision;

(*c*) lighting on rotating machinery is such that the hazard of stroboscopic effect is eliminated; and

(*d*) luminaires and lamps are kept clean and, when defective are replaced or repaired forthwith.

(4) With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an illuminance of not less than 0,3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance shall be not less than 20 lux.

(5) An employer shall ensure that the emergency sources of lighting prescribed by subregulation (4)—

(*a*) are capable of being activated within 15 seconds of the failure of the lighting prescribed by subregulation (1);

(*b*) will last long enough to ensure the safe evacuation of all indoor workplaces;

(*c*)

are kept in good working order and tested for efficient operation at intervals of not more than three months; and

(*d*)

where directional luminaires are installed, these are mounted at a height of not less than two metres above floor level and are not aimed between 10 degrees above and 45 degrees below the horizontal line on which they are installed.

(6) An employer engaged in building work shall cause all rooms, stairways, passageways, gangways, basements and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

4. Windows.—(1) In order to effect visual contact with areas outside a workplace, where employees work the majority of their shift in a room of which the floor area is less than 100 square metres, the employer of such employees shall cause every such room to be provided with windows in such a way that—

(*a*)

the total glazed area of such windows is not less than three fifths of the square root of the floor area of the room, both areas measured in square metres;

(*b*)

the window sills are not higher and the window heads are not lower than one and a half metres above the floor level of the room; and

(*c*)

such windows are glazed with transparent material.

(2) Unless an inspector otherwise directs, the provisions of subregulation (1) shall not apply under conditions where natural light will have an adverse effect on the process or material used in a room, or where the process in a room has to be conducted under critical conditions of light, temperature, humidity or air movement, or where the judgment of texture or colour in a room has to be done under conditions of constant lighting quality and intensity, or where, for reasons of safety, privacy or security, compliance with the intended provisions becomes impracticable.

(3) Where the penetration of direct sunlight into any workplace may pose a threat to the safety of persons in such workplace, the employer concerned shall ensure that such workplace is screened to avoid such penetration, but retaining, as far as is practicable, outside visual contact.

5. Ventilation.—(1) An employer shall ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that—

(*a*)

the air breathed by employees does not endanger their safety;

(*b*)

the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;

(*c*)

the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;

(*d*)

the prescribed exposure limits for airborne substances therein are not exceeded; and

(*e*)

the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour or dust.

(2) Where the measures prescribed by subregulation (1) are not practicable, or where there is a danger of unsafe air in the breathing zone of an employee, the employer shall provide every such employee with, and ensure that he correctly uses, respiratory protective equipment of a type that reduces the exposure of the employee to a safe level and the employer shall, further, inform him of the dangers of and the precautionary measures against excessive exposure.

(3) The provisions of subregulation (1) (*b*) and (*c*) shall not apply in respect of workplaces where the ambient pressure differs by more than 20 per cent from atmosphere pressure at sea level.

[Sub-r. (3) amended by GN R1754 of 1989.]

6. Housekeeping.—(1) A user of machinery shall provide and maintain sufficient clear and unobstructed space at every machine to enable work to be carried out without danger to persons.

(2) An employer shall—

(*a*)
with the exclusion of workplaces where building work is performed, make at least 2,25 square metres of effective open floor area available for every employee working in an indoor workplace;

(*b*)
make available and maintain an unimpeded work space for every employee;

(*c*)
keep every indoor workplace clean, orderly and free of materials, tools and similar things which are not necessary for the work done in such work place;

(*d*)
keep all floors, walkways, stairs, passages and gangways in a good state of repair, skid-free and free of obstructions, waste or materials;

(*e*)
keep the roof and walls of every indoor workplace sound and leak-free;

(*f*)
board over or fence, or enclose with rails or guards, or take other measures which may be necessary under the circumstances to ensure the safety of persons, all openings in floors, all hatchways and all stairways and any open sides of floors or buildings through or from which persons are liable to fall: Provided that such boarding or guarding may be omitted or removed from the time and to the extent necessary for the access of persons or the movement of material; and

(*g*)
erect a catch platform or net above an entrance or passageway or above a place where persons work or pass, or fence off the danger area if work is being performed above such entrance, passageway, place or danger area and there is a possibility of persons being struck by falling objects.

(3) No employer shall require or permit any person to, and no person shall, dispose of any article from a high place except by hoist or chute unless arrangements have been made to secure the safety of persons who may be struck by falling objects.

7. . . . . . .

[Reg. 7 substituted by GNR.489 of 1994 and repealed by GNR.307 of 2003.]

8. Precautions Against Flooding.—(1) Where a substantial risk exists that a workplace may be flooded, the employer shall take measures to be informed forthwith of any imminent flooding.

(2) Every employer shall take measures to be informed forthwith of any imminent flooding from constructions for conserving water, or which may cause water to converge or accumulate on his premises, and shall, prior to the erection of such a construction, give notice in writing to all persons situated in the danger zone below such construction of the possibility of flooding owing to such construction.

9. Fire Precautions and Means of Egress.—(1) In order to expedite the evacuation of a workplace in case of fire, every employer shall ensure that—

(*a*) any emergency escape door from any room or passage or at a staircase shall, as far as is practicable, be hung so as to open outwards;

(*b*) every door of a room in which persons may be present, and every door of a passage or at a staircase serving as a means of exit from such room, shall be kept clear and capable of being easily and rapidly opened from inside so as to ensure quick and easy evacuation;

(*c*) the provisions of paragraphs (*a*) and (*b*) shall also be complied with in respect of the outer escape exit from the workplace;

(*d*) staircases and steps leading from one floor to another or to the ground shall be provided with substantial hand-rails;

(*e*) staircases intended to be used as fire escapes shall—

(i) be constructed of non-combustible material;

(ii) be kept clear of any material or other obstruction; and

(iii) not terminate in an enclosed area;

(*f*) staircases, passages and exits intended for escape purposes shall be of a width and of a gradient which will facilitate the quick and safe egress of the number of persons intended to make use of them; and

(*g*) having regard to the size, construction and location of a workplace, the number of persons, and the activity therein, such workplace is provided with at least two means of egress situated as far apart as is practicable.

(2) Having regard to the size, construction and location of the workplace, and the amount and type of flammable articles used, handled or stored on the premises, an employer shall provide on the premises an adequate supply of suitable fire-fighting equipmet at strategic locations or as may be recommended by the fire chief of the local authority concerned, and such equipment shall be maintained in good working order.

10. Offences and Penalties.—Any person who contravenes or fails to comply with any provision of regulation 2, 3 (1), 3 (3), 3 (4), 3 (5), 3 (6), 4 (1), 4 (3), 5 (1), 5 (2), 6, 7, 8 or 9

shall be guilty of an offence and liable on conviction to a fine not exceeding R1000 or to imprisonment for a period not exceeding six months and, in the case of a continuous offence, to an additional fine of R5 for each day on which the offence continues or to additional imprisonment of one day for each day on which the offence continues: Provided that the period of such additional imprisonment shall in no case exceed 90 days.

11. Withdrawal of Regulations.—The following regulations are hereby withdrawn:

(*a*) Regulations B.1 (1), B.1 (2), B.1 (3), B.1 (4), B.2, B.5, B.11, B.13, B.15, B.17, published under Government Notice R.929 of 28 June 1963, as amended by Government Notice R.2237 of 30 November 1973;

(*b*) regulations C.10, C.11 and C.12, published under Government Notice R.929 of 28 June 1963; and

(*c*) regulation D.4, published under Government Notice R.1934 of 13 December 1963, as amended by Government Notice R.3475 of 9 October, 1969.

12. Short Title.—These regulations shall be called the Environmental Regulations for Workplaces, 1987.

Schedule:

MINIMUM AVERAGE VALUES OF MAINTAINED ILLUMINANCE (MEASURED ON THE WORKING PLANE UNLESS OTHERWISE INDICATED)

Location/ Industry	*Place or type of activity*	*Illuminance (Lux)*	
Abbatoirs	Cold store, casting and stunning pen	100	
	Bleeding area, slaughtering	150	
	Dressing, evisceration, washing, tripery and skin sorting	200	
	Inspection and grading	300	
	Boning, cleaning, grinding, packing and cutting	200	
	Manufacture of by-products	100	
	(See also OUTDOOR AREAS).		
Ablutions	Wash-rooms, toilets and changing rooms	100	(at floor level)
Abrasive Blasting	Sand or other	200	
Aircraft Manufacture	Stock park production	300	
	Drilling, sheet aluminium layout, template work, wing section, cowlling, welding, sub-assembly, landing gear, fuselage, final assembly, inspection, riveting, screw fastening and similar activities	200	
	Maintenance and repairs (hangars)	200	
	Engine testing	200	
Assembly Plants	Rough work, e.g. frame assembly, heavy machinery assembly	100	
	Medium work, e.g. machined parts, engine assembly, vehicle body assembly	200	

	Fine work, e.g. radio and telephone equipment, typewriter and office machinery assembly	500	
	Very fine work, e.g. small precision assembly	1000	
Bakeries	Mixing and make-up rooms, oven rooms, wrapping rooms	100	
	Decorating and icing	200	
	General working areas	100	
Banks	Counter (see also OFFICES)	300	
	General working areas	200	
Blacksmith	General working areas	75	
	Tempering	50	
Boiler Houses	Coal and ash handling	75	(at floor level)
	Boiler rooms	100	
Bookbinding	Folding, pasting, punching, stitching	200	
	Cutting, assembling, embossing	300	
	Finishing, blocking, inlaying and inspection	500	
Boot and Shoe	Sorting and grading	500	
	Clicking and closing: Preparatory operations	500	
	Cutting tables and presses, stitching	500	
	Bottom stock preparation, lasting, bottoming, finishing	500	
	Shoe Rooms	500	
Box, Carton and Paper-Bag Making	Corrugated boards, cartons, containers and paper-bag manufacture, coating and laminating process	150	
	Associated printing	200	
Brewing, Distilling and	General working areas	100	
Soft Drinks	Brewing, bottling and canning plants	300	
	Bottle inspection	300	
Building and	Industrialised building plants	200	
Construction	Concrete shops	150	
	General working areas	20	
	Walkways and access	5	(at floor level)
Canning and	Inspection of products	300	
Preserving	Preparation, kettle areas, mechanical cleaning, dicing, trimming	200	
	Canned and bottled goods:Retorts	150	
	High speed labelling lines	200	
	Can and bottle inspection	300	
	Automatic processes	25	
Carpet Making	Winding, beaming	150	
	Designing, Jacquard card cutting, setting, patternwork, tufting, topping, cutting, hemming, fringing	200	
	Weaving, mending, inspection	300	

	Dyeing	400	
Cement, Asbestos, Gypsum, Talc, Etc. Products and Moulded Goods	Fiberising, mixing, shredding, agitating, flat and corrugated sheets and moulded goods manufacture	200	
	Pipe and pole manufacture: mixing, spinning, reinforcing, stripping	150	
Cement Manufacture	Control room, milling, conveying, drying, pumping, burners' platform, coal plant milling, feeding, bagging, bulk filling, loading	150	
	Vertical control panel face	200	(vertical illuminance)
Ceramics	see POTTERY AND CLAY PRODUCTS		
Chemical works	Hand furnaces, boiling tanks, stationary driers, stationary or gravity crystallisers, mechanical driers, evaporators, filtration plants, mechanical crystallising, bleaching, extractors, percolators, nitrators, electrolytic cells	100	
	Controls, gauges, valves, etc.	100	(vertical illuminance)
	Control rooms:		
	Vertical control panels	200	
	Control desks	200	
	General working areas	100	
	(see also OUTDOOR AREAS)		
Clothing	Matching up	300	
	Sorting, cutting, sewing	300	
	Pressing, cloth treating	200	
	Inspection, hand tailoring	500	
Cold Stores	General working areas	100	
Confectionery,	Mixing, blending, boiling	100	
(Chocolates, Sweets, Etc.)	Husking, winnowing, fat extraction, crushing, refining, feeding, bean cleaning, sorting, milling, cream making	150	
	Hand decorating, inspection, wrapping, packing	200	
Court Rooms	Seating	100	
	Court	300	
Dairies	General working areas	150	
	Bottle inspection	300	
	Bottle filling	300	
	Despatching	100	
Die-sinking and	General	200	
engraving	Fine	500	
	Hand engraving	500	
Dry Cleaning	See LAUNDERING AND DRY CLEANING		
Dye Works	Reception, "grey" perching	500	
	Wet processes	150	
	Dry processes	150	
	Dyer's offices	500	

	Final perching (examination)	1500	
Electrical Goods Manufacture	Impregnating processes, mica working	150	
	Coil and armature processes:		
	General	200	
	Fine (e.g. instrument coils)	400	
Electricity Generating Stations	Turbine halls (operating floor)	200	(at floor level)
	Blowers, auxiliary generators	100	
	Transformer chambers, etc.	75	
	Cable tunnels, covered ways, storage tanks	50	
	Battery and charging equipment rooms	100	
	Boiler front (operating floor)	150	(at floor level)
	Between boilers (operating floor, stairs, galleries and operating plat forms, and precipitator high voltage chamber	100	(at floor level)
	Pulverisers, feeders, ash plant, conveyors (tunnel, junction tower)	75	(at floor level)
	Boiler house and turbine house basements	100	(at floor level)
	Pump houses and rooms, water treatment plant	100	
	Overland conveyor housing walkways	50	
	Control rooms:		
	Vertical control panel face	200	(vertical illuminance)
	Rear of control panels	100	
	Control desks	200	
	Computer room	500	
	Switch houses and rooms	150	
	Relay and telecommunication rooms	200	
	Nuclear reactors and steam raising plants:		
	Reactor areas, boilers, galleries	150	(at floor level)
	Gas circular bays	150	(at floor level)
	Reactor charge/discharge face	150	(at floor level)
	High voltage substations	100	(vertical)
	(see also OUTDOOR AREAS)		
Fire Stations	Appliance rooms	100	
	External apron	30	
Forging	General	100	
Foundaries	Charging floor, tumbling, cleaning, shaking out, rough moulding and core making	100	
	Fine moulding and core making, inspection	200	
Furniture Factories	Raw materials store	50	
	Finished goods store	75	
	Wood-machining and assembly	150	
	Rough sawing and cutting	150	

	Machining, sundry and assembly of components	250	
	Cabinet making:		
	Veneer sorting and preparation	500	
	Veneer pressing	250	
	Components store	75	
	Fitting, final inspection	400	
	Upholstery:		
	Cloth inspection	750	
	Filling, covering	250	
	Slipping	400	
	Cutting, sewing	400	
	Mattress making:		
	Assembly	250	
	Tape edging	500	
	Tool rooms:		
	General	250	
	Benches	400	
	Spray booth:		
	Colour finishing	250	
	Clear finishing	150	
Garages	Parking areas (interior)	50	
	Washing, polishing, greasing	100	
	Servicing pits	100	
	Repairs	200	
	Work-bench	250	
	Apron fuel pumps	100	
Gasworks	Retort houses, oil gas plants, water gas plants, purifiers, coke screening and coke handling plants	50	(at floor level)
	Governor, meter, compressor, booster and exhauster houses	75	
	(See also OUTDOOR AREAS)		
Gauge and Tool Rooms	General	500	
General Factory	Canteens/Dining-rooms	100	
Areas	Cloak-rooms	100	(at floor level)
	Entrances	100	(at floor level)
	Rest rooms	100	(at floor level)
	First-aid rooms	100	
Glass processing	Furnace rooms, bending, annealing lehrs (ovens), mixing rooms, forming (blowing, drawing, pressing, rolling)	100	
	Cutting to size, grinding, polishing, toughening	150	
	Finishing (bevelling, decorating, etching, silvering)	200	
	Brilliant cutting	500	

	Inspections:		
	General	150	
	Fine	500	
Glove Making	General working areas	300	
	(See also CLOTHING)		
Hat Making	Stiffening, braiding, cleaning, refining	200	
	Forming, sizing, pounching, flanging, finishing, ironing	100	
	General working areas	100	
	(See also CLOTHING)		
Hosiery and Knitwear	Circular and flat knitting machines, universal winders, cutting out, folding and pressing	200	
	Lock Stitch and overlocking machines	300	
	Mending:		
	Light goods	800	
	Dark goods	1000	
	Examining and hand finishing:		
	Light goods	400	
	Dark goods	800	
	Linking or running on	300	
Hostels and	Entrance halls	100	(at floor level)
Restaurants	Reception and accounts	200	
	Stairs, corridors	100	(at floor level)
	Laundries		
	Kitchens	150	
	General working areas	50	
Inspection Area (Engineering)	Rough work, e.g. counting, rough visual checking of stock parts, etc.	100	
	Medium work, e.g. “Go” and “No-go” gauges	200	
	Sub-assemblies	200	
	Fine work, e.g. radio and telecommunication equipment, calibrated scales, precision mechanisms, instruments	500	
	Very fine work. e.g. gauging and inspection of small intricate parts	1 000	
	Minute work	1 500	
Iron and Steel	Slab yards, melting shops, ingot stripping, soaking pits, blast furnace working areas, picking and cleaning lines, mechanical pump houses, slabbing and large section rolling mills	75	
	Mould preparation, light section, wire and cold strip mills, mill inspection and conditioning, sheet and plate finishing, tinning, galvanising and roll shops	100	
	Plate inspection	200	
	Tinplate inspection and pulpits (control rooms)	200	
	General working areas	75	
Jewellery and	Fine processes	500	

Watchmaking	Minute processes	3 000	
	Gem cutting, polishing and setting	1 000	
Laboratories and Test Rooms	General laboratories, balance rooms	200	
	Electrical and electronic instrument laboratories	300	
	Calibrated scales, precision mechanical instruments	300	
Laundering and Dry Cleaning	Receiving, sorting, washing, drying, ironing (calendering) despatch	150	
	Dry cleaning, bulk machine work	150	
	Hand ironing, pressing, inspection, mending	200	
	Spotting	250	
Leather and Tanning	Vats, cleaning, tanning, stretching, cutting, fleshing and stuffing	100	
	Finishing, staking, splitting	150	
	Pressing and glazing	300	
	Cutting, scarfing and sewing	500	
	Grading and matching	500	
Libraries, Museums and Art Galleries	Shelves	100	(vertical illuminance)
	Binding	300	
	Cataloguing, sorting	200	
	General working areas	100	
Lifts	Car interior	100	
	Motor room	300	
Machine, Shops and Fitters' Benches	Rough bench and machinery work, rough checking and stock parts	100	
	Medium bench and machine work, ordinary automatic machines, rough grinding, medium buffing and polishing	200	
	Fine bench and machinery work, fine automatic machines, medium grinding, fine buffing and polishing	500	
	Extra-fine bench and machine work, fine grinding	800	
Materials Handling	Wrapping, packing, labelling, despatch	150	
	Sorting stock, classifying, loading	100	
Milling (Flour)	Cleaning, grinding, rolling, purifying, silks and packing	150	
	Wetting tables, product control	200	
Motor Vehicle Manufacture	General sub-assemblies, chassis assembly, car assembly, trim shops, body sub-assembly, body assembly	200	
	Upholstery	400	
	Final inspection	300	
	Spray booths (see PAINT SHOPS AND SPRAYING BOOTHS)		
Offices	Entrance halls and reception areas	100	
	Conference rooms, general offices, typing and filing	300	
	Computer and business machine operation	500	

	Drawing offices	500	
Outdoor Areas	Abattoirs:	(at floor level)	
	Lairage	20	(at floor level)
	Race	50	(at floor level)
	Ash handling, precipitator and fan area	20	(at floor level)
	Bulk loading/unloading areas where manual operations are performed	50	
	Bulk loading/unloading areas where operations are performed mechanically	10	
	Cool-water screens	20	
	Fuel pumps	100	
	Storage areas (excluding dumps)	5	(at floor level)
	Water clarification plant and storage tanks (operating areas)	50	
	Marshalling yards	10	(at floor level)
	Main entrance and exits	20	
	Transformer and reactor terrain	20	
	High voltage yard, distribution and substation	10	
	Gangways, catwalks, stairways, etc.	20	(at floor level)
	Conveyor structure	10	
Paint Manufacture	Filling, blending, dispersion and reactor platform	150	
	Batch mixing	300	
	Colour matching	300	
Paint Shops and Spraying Booths	Rubbing, dipping, ordinary painting, spraying and finishing	200	
	Fine painting, spraying and finishing	300	
	Retouching and matching	500	
Paper and Paper Board Manufacture	Paper and board making:Machine houses, calendering, pulp mills, preparation plants, cutting, finishing, trimming	150	
	Inspection and sorting (overhauling)	200	
	Paper converting processes:		
	General	150	
	Associated printing	200	
Passages and Lobbies	All areas	75	(at floor level)
Pharmaceutical and	Raw material storage	150	
Fine Chemical	Control laboratories and testing	200	
	Pharmaceuticals manufacture: Grinding, granulating, mixing, drying, tabletting, sterilising, washing, preparation of solutions, filling, labelling, capping, inspection	200	
	Fine chemical manufacture:		

	Plant processing	150	
	Fine chemical finishing	200	
Photographic	Safety light: dark room	5	
Plastics	Manufacture (See CHEMICAL WORKS)		
	Processing:		
	Calendering, extrusion	200	
	Moulding – compression, injection, blowing	150	
	Sheet fabrication:		
	Shaping	150	
	Trimming, machining, polishing	200	
	Cementing	150	
	Colour matching and inspection	500	
Plating	Vats and baths, buffing, polishing, burnishing	200	
	Final buffing and polishing	200	
Post Offices	Counters	200	
	Sorting of mail	300	
	General working areas	100	
Pottery and Clay Products	Grinding, filter pressing, kiln room, moulding, pressing, cleaning, trimming, glazing, firing	200	
	Enamelling, colouring, decorating	300	
Printing	Type foundries:		
	Matrix making, dressing type, hand and machine casting	150	
	Front assembly, sorting	300	
	Printing plants:		
	Machine composition, imposing stones	150	
	Presses	200	
	Composition room	300	
	Proof-reading	300	
	Electrotyping:		
	Block-making, electroplating, washing, backing	150	
	Moulding, finishing, routing	200	
	Photo-engraving:		
	Block-making, etching, masking	200	
	Finishing, routing	300	
	Colour printing: Inspection area	500	
Refrigeration	Chilling and cold rooms, icemaking	100	
Rubber Processing	Stock and fabric preparation	150	
	Dipping, moulding, compounding, calendering	150	
	Tyre and tube making	200	
	Curing and inspection	300	
Schools and	Stairs, corridors	100	(at floor level)
Educational Institutions	Class and lecture rooms	200	
	General working areas	100	

Sheet Metal	Benchwork, pressing, punching, shearing, stamping, spinning, folding	150	
	Scribing	200	
	Sheet inspection	300	
Shops, Store Rooms	Stairs, corridors	100	(at floor level)
and Warehouses	General working areas	100	
Soap Manufacture	All processes, e.g. kettle houses and ancillaries, batch or continuous soap rooting, soap stamping	150	
	General areas	100	
	Vertical control panel face	200	(vertical illuminance)
	Edible product processing and packing	150	
Stairs, Escalators and Ramps	General	100	(at floor level)
Storage Battery Manufacture	General	100	
Structural Steel	General	100	
Fabrication	Marking off	200	
Sugar	Manufacture:		
	Crushing, settling, evaporating, boiling, curing, drying, packing	100	
	Refining:		
	Centrifuging, metering, filtering, condensing	100	
	Panning, mixing, drying	200	
	Grading, colour inspection	500	
Surgeries, Hospitals	Stairs, corridors	100	(at floor level)
and Clinics	General working areas	100	
Tailoring	Hand tailoring	500	
Telephone Exchanges	Manual exchange rooms (on desk)	100	
	Main distribution frame rooms in automatic exchanges	200	
	Battery rooms	100	
Textile (Cotton or Linen)	Bale breaking, blowing, carding	100	
	Roving, slubbing, spinning (ordinary counts) winding, backling, spreading, cabling	100	
	Warping, slashing, dressing, dyeing, doubling (fancy), spinning (fine counts)	150	
	Healding (drawing in)	500	(vertical)
	Weaving:		
	Patterned cloth	500	
	Plain “grey” cloth	150	
	Cloth inspection	500	
Textile (Jute)	Weaving, spinning flat, Jacquard carpet looms, cop winding	150	
	Yarn calender	100	

Textile (Silk or Synthetic)	Soaking, fugitive tinting, conditioning or setting of twist	150	
	Spinning	300	
	Winding, twisting, rewinding and coning, quilling, slashing	200	
	Healding (drawing in)	500	(vertical illuminance)
	Weaving, finishing	500	
	Inspection	500	
Textile (Woollen)	Scouring, carbonising, teasing, preparing, raising, brushing, pressing, back-washing, gilling, crabbing and blowing	100	
	Blending, carding, combing (white) tentering, drying, cropping	150	
	Spinning, roving, winding, warping, combing, (coloured) twisting	500	(vertical illuminance)
	Weaving:		
	Fine worsteds	500	
	Medium worsteds, fine woollens	300	
	Heavy woollens	200	
	Burling, mending	500	
	Perching:		
	"Grey"	500	
	Finals	1500	
Theatres, Cinemas and Halls	Stairs, corridors	100	(at floor level)
	Booking offices	200	
	Projection rooms	150	
Tobacco	Primary manufacture:Weighing, blending, conditioning, threshing, cutting	100	
	Cigarette making:		
	Manufacturing processes, filter plug-makers	500	
	Inspection (catcher)	500	
	Cigarette or tobacco packing	500	
Upholstering	Furniture and Vehicles	200	
Warehouses and Bulk Storing	Small materials, racks, packing and despatch	150	
	Issue counters	200	
	Loading bays, large materials	75	
	Inactive storage	20	
	(Also see MATERIALS HANDLING)		
Welding and Soldering	Gas and arc welding, rough spot welding	150	
	Medium soldering, brazing and spot-welding e.g. domestic hardware	200	
	Fine soldering and spot welding, e.g. instruments, radio set assembly	500	
	Very fine soldering and spot welding, e.g. electronic printed circuits	1500	
Woodworking and Sawmilling	Rough sawing and bench work, sizing, planing, rough sanding	150	

	Medium machine and bench work, glueing, veneering, cooperage	200
	Fine bench and machine work, fine sanding and finishing	200

[Schedule amended by GN R1754 of 1989.]