

FEDERAL SUBSIDIARY LEGISLATION

OCCUPATIONAL SAFETY AND HEALTH ACT 1994 [ACT 514]

P.U. (A) 131/2000

OCCUPATIONAL SAFETY AND HEALTH (USE AND STANDARDS OF EXPOSURE OF CHEMICALS HAZARDOUS TO HEALTH) REGULATIONS 2000

Publication :4th April 2000Date of coming into operation :4th April 2000

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Preamble

In exercise of the powers conferred by section 66 of the Occupational Safety and Health Act 1994 [*Act 514*], the Minister makes the following regulations:

PART I - PRELIMINARY

Regulation 1. Citation and commencement.

(1) These regulations may be cited as the **Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.**

(2) These Regulations shall come into operation on 4 April 2000.

Regulation 2. Interpretation.

In these Regulations, unless the context otherwise requires -

"airborne concentration" in relation to a chemical means the quantity of a chemical measured in terms of its volume or its mass in a specified volume of air or the number of fibres, if the physical form of the chemical is fibrous, in specified volume of air which is carried by or through the air;

"approved" means approved in writing by the Director General;

"assessor" means an employee or any other person appointed by the employer and registered with the Director General to carry out assessments of risks to health;

"ceiling limit" means the airborne concentration that should not be exceeded during any part of the working day;

"chemicals" means chemical elements, or compounds or mixtures thereof, whether natural or synthetic, but does not include micro-organisms;

"chemicals hazardous to health" means any chemical or preparation which -

(a) is listed in Schedule I or II;

(b) possesses any of the properties categorised in Part B of Schedule I of the Occupational Safety and Health (Classification, Packaging and Labelling of Hazardous Chemicals) Regulations 1997 [*P. U. (A) 143/97*];

(c) comes within the definition of "pesticide" under the Pesticides Act 1974 [Act 149]; or

(*d*) is listed in the First Schedule of the Environmental Quality (Schedule Wastes) Regulations 1989 [*P. U. (A) 139/89*];

"Chemical Safety Data Sheet" means a document which contains relevant information on a chemical and is furnished in pursuance of the Occupational Safety and Health (Classification, Packaging, and Labelling of Hazardous Chemicals) Regulations 1997 [*P. U. (A) 143/97*];

"Director General" means the Director General of Occupational Safety and Health appointed under subsection 5(1) of the Act;

"engineering control equipment" means any equipment which is used to control exposure of employees to chemicals hazardous to health and includes local exhaust ventilation equipment, water spray or any other airborne chemical removal and containment equipment;

"health surveillance" means any examination and investigations which may be necessary to detect exposure levels and early biological effects and responses, and includes biological monitoring, biological effect monitoring, medical surveillance, enquiries about symptoms of occupational poisoning or occupational disease and review of records and occupational history;

"hygiene technician" means an employee or any other person appointed by the employer and registered with the Director General to carry out any inspection, examination or test on engineering control equipment installed in a place of work or to carry out chemical exposure monitoring;

"maximum exposure limit" means a fifteen-minute time-weighted average airborne concentration which is three times the eight-hour time-weighted average airborne concentration of the chemicals specified in Schedule I;

"medical surveillance" means the monitoring of a person for the purpose of identifying changes in health status due to occupational exposure to chemicals hazardous to health;

"occupational health doctor" means a medical practitioner who is registered with the Director General to conduct medical surveillance programmes of employees;

"permissible exposure limit" means a ceiling limit or an eight-hour time-weighted average airborne concentration or the maximum exposure limit;

"personal protective equipment" means any equipment which is intended to be worn or held by a person at work and which protects him against one or more risks to his health or safety and any additional accessory designed to meet that objective;

"supplier" means a person who supplies chemicals and include a formulator, a manufacturer, an importer or a distributor;

"time-weighted average" in relation to airborne concentration, means an average airborne concentration over a specified period of time;

"use" means production, processing, handling, storage, transport, disposal and treatment.

Regulation 3. Application.

(1) These Regulations shall apply to all places of work which are within the jurisdiction of the Act where chemicals hazardous to health are used except chemicals which are -

(a) defined as radioactive materials under the Atomic Energy Licensing Act 1984 [Act 304];

(b) foodstuffs;

(c) hazardous to health solely by virtue of their explosive or flammable properties, or solely because they are at a high or low temperature or a high pressure; and

(d) pharmaceutical products.

(2) For the purpose of this regulation, "pharmaceutical product" means a drug in a pharmaceutical dosage form for use by humans as medicine.

Regulation 4. Duty of employer and self-employed person.

(1) Where any duty is imposed by these Regulations on an employer in respect of his employees, he shall, so far as is practicable, be under a like duty in respect of any other person who may be affected by the work activity carried on by the employer, whether at work or not, except that the duties of the employer -

(a) under regulation 26 shall not extend to persons who are not his employees, unless those persons are on the premises and carrying out work for the employer; and

(b) under regulation 27 shall not extend to persons who are not his employees.

(2) These Regulations, except regulations 26 and 27, shall apply to a self-employed person as they apply to an employer and an employee.

PART II - IDENTIFICATION OF CHEMICALS HAZARDOUS TO HEALTH

Regulation 5. Register of chemicals hazardous to health.

(1) An employer shall identify and record in a register all chemicals hazardous to health used in the place of work.

(2) The register shall be maintained in good order and condition and be updated from time to time and shall contain the following information:

(a) a list of all chemicals hazardous to health used;

(b) the current Chemical Safety Data Sheet for each of the chemicals hazardous to health except for pesticides which shall have information as specified in Schedule III;

(c) the average quantity used, produced or stored per month or per year whichever is applicable for each of the chemicals hazardous to health;

(d) the process and work area where the chemicals hazardous to health are used; and

(e) the name and address of the supplier of each of the chemicals hazardous to health.

(3) The register shall be accessible to all employees at the place of work who may be exposed or are likely to be exposed to chemicals hazardous to health.

(4) The requirements in subregulations (1) and (2) shall not apply if the employer has complied with the requirements of regulation 9 and subregulation 11(1) of the Environmental Quality (Scheduled Wastes) Regulations 1989 [*P. U. (A) 139/89*].

Regulation 6. Ceiling limit.

An employer shall ensure that the exposure of any person to any chemical hazardous to health listed in Schedule I at no time exceeds the ceiling limit specified for that chemical in that Schedule.

Regulation 7. Eight-hour time-weighted average.

(1) An employer shall ensure that the exposure of any person to any chemical hazardous to health listed in Schedule I in any eight hour work shift of a work week does not exceed the eight-hour time-weighted average airborne concentration specified for that chemical in that Schedule.

(2) Notwithstanding subregulation (1), the exposure of any person to any chemical hazardous to health listed in Schedule I shall not exceed the maximum exposure limit for that chemical during the work shift.

Regulation 8. Compliance with permissible exposure limit using respirator.

(1) For the purpose of determining whether the employer has complied with the permissible exposure limit, the degree of protection afforded by the respirator for the periods during which the respirator is worn shall be taken into account.

(2) The period referred to in subregulation (1) shall be averaged with the exposure level of the airborne concentration during the period when respirators are not worn to determine the employee's daily time-weighted average exposure.

(3) For the purpose of this regulation, "degree of protection" means the ratio of the airborne concentration of the contaminant outside the respirator to the concentration of contaminant inside the face piece of the respirator.

PART IV - ASSESSMENT OF RISK TO HEALTH

Regulation 9. Assessment of risk to health.

(1) An employer shall not carry out any work which may expose or is likely to expose any employee to any chemical hazardous to health unless he has made a written assessment of the risks created by the chemical to the health of the employee.

(2) The assessment mentioned in subregulation (1) shall contain the following:

(a) the potential risks to an employee as a result of exposure to chemicals hazardous to health;

(b) the method and procedures adopted in the use of the chemicals hazardous to health;

(c) the nature of the hazard to health;

(d) the degree of exposure to such chemicals hazardous to health;

(e) the risk to health created by the use and the release of chemicals from work processes;

(f) measures and procedures required to control the exposure of an employee to chemicals hazardous to health;

(g) the measures, procedures, and equipment necessary to control any accidental emission of a chemical hazardous to health as a result of leakage, spillage, or process or equipment failure;

(h) the necessity for employee exposure monitoring programme;

(i) the necessity for health surveillance programme; and

(*j*) the requirement for the training and retraining of employees as required under regulation 22.

(3) Where work which may expose or is likely to expose any employee to chemicals hazardous to health was commenced before the coming into operation of these Regulations, the employer shall conduct the assessment within one year from the date of coming into operation of these Regulations.

Regulation 10. Review assessment.

The assessment carried out under regulation 9 shall be reviewed if -

- (a) there has been a significant change in the work to which the assessment relates;
- (b) more than five years have elapsed since the last assessment; or

(c) directed by the Director General, Deputy Director General or the Director of Occupational Safety and Health.

Regulation 11. Assessment to be carried out by an assessor.

The employer shall ensure that any assessment carried out pursuant to this Part is conducted by an assessor.

Regulation 12. Assessment of risk to health report.

(1) Any person appointed by the employer under regulation 11 to carry out any assessment shall, within one month of the completion of the assessment, furnish the employer with a report of the assessment.

(2) If the assessment carried out under subregulation (1) indicates that a place of work, plant, substance or process is likely to cause immediate danger to life or property, the person carrying out the assessment shall immediately inform the employer about the danger.

Regulation 13. Assessment report.

(1) The employer shall ensure that the report of the assessment conducted pursuant to regulations 9 or 10 is maintained in good order and condition for a period of not less than thirty years.

(2) The employer shall make available the assessment report for examination upon request by the Director General or by any employee exposed or likely to be exposed to chemicals hazardous to health.

PART V - ACTION TO CONTROL EXPOSURE

Regulation 14. Action to control exposure.

(1) Where an assessment report indicates that action is required to eliminate or reduce the actual or potential exposure of an employee to chemicals hazardous to health, an employer shall carry out such action, which may include changes to work processes, practices, procedures, plants or engineering control equipment, within one month after receiving the assessment report from the assessor.

(2) The employer shall ensure that all control measures implemented under subregulation (1) reduce the exposure level of employees to chemicals hazardous to health to the lowest practicable level, or for those chemicals to which have been assigned with permissible exposure limits, to below the limits.

Regulation 15. Control measures.

(1) The employer shall control chemicals hazardous to health through the following control measures:

- (a) elimination of chemicals hazardous to health from the place of work;
- (b) substitution of less hazardous chemicals for chemicals hazardous to health;
- (c) total enclosure of the process and handling systems;
- (d) isolation of the work to control the emission of chemicals hazardous to health;
- (e) modification of the process parameters;

(f) application of engineering control equipment;

(g) adoption of safe work systems and practices that eliminate or minimise the risk to health; or

(h) provision of approved personal protective equipment.

(2) The employer shall ensure that all safe work systems and practices are documented and implemented.

(3) The employer shall ensure that all safe work systems and practices are reviewed whenever there is a significant change to the process, equipment, materials or control measures installed.

Regulation 16. Use of approved personal protective equipment.

(1) Approved personal protective equipment shall be used -

(a) where the application of control measures specified in paragraphs 15(1) (a) to (g) would be impracticable;

(b) as an interim measure while other preferred control measures are being designed and installed; or

(c) where the measures taken to comply with paragraphs 15(1) (a) to (g) do not adequately control an employee's exposure to chemicals hazardous to health.

(2) Where the approved personal protective equipment is used to control exposure to chemicals hazardous to health, the employer shall establish and implement procedures on the issuance, maintenance, inspection and training in the use of the approved personal protective equipment.

(3) The approved personal protective equipment provided to employees pursuant to subregulation (1) shall -

- (a) be suitable to the type of work in which they are employed;
- (b) fit the employees;
- (c) not adversely affect the health or medical condition of the employees; and
- (d) be in sufficient supply and readily available to employees who require it.

Regulation 17. Engineering control equipment.

(1) Any engineering control equipment provided pursuant to subparagraph 15(1) (f) shall be -

(a) inspected at an appropriate intervals by the employer, each interval being no longer than one month; and

(b) examined and tested for its effectiveness by a hygiene technician at appropriate intervals, each interval being no longer than twelve months.

(2) Every engineering control equipment shall be maintained and operated at all times while any machinery or plant is in operation, and for such time thereafter as to comply with subregulation 14(2).

Regulation 18. Design, construction and commissioning of local exhaust ventilation equipment.

(1) Without prejudice to the requirement of subregulation 17 (1), any local exhaust ventilation equipment installed shall be -

(a) designed according to an approved standard by a registered professional engineer and constructed according to the design specifications; and

(b) tested by a registered professional engineer after construction and installation to demonstrate that the equipment meets the design specifications.

(2) For the purpose of this regulation, "registered professional engineer" means an engineer registered under the Registration of Engineers Act 1967 [*Act 138*].

Regulation 19. Records of engineering control equipment.

Records of the design, construction, testing, inspection, examination and maintenance of engineering control equipment persuant to regulations 17 and 18 shall be maintained by the employer and shall be produced for inspection when directed by the Director General.

PART VI - LABELLING AND RELABELLING

Regulation 20. Duty of employer to ensure labelling.

(1) An employer shall ensure that all chemicals hazardous to health supplied or purchased by him and used in the place of work are labelled and that the labels are not removed, defaced, modified or altered.

(2) When the labels mentioned in subregulation (1) are removed, defaced, modified or altered while the chemical hazardous to health is being used at the place of work, the employer shall relabel the chemical.

Relabelling

21. (1) When a chemical hazardous to health is transferred to another container, other than that in which it was originally supplied, and the contents of that container are not used within a normal workshift, the employer shall ensure that the container is relabelled.

(2) If the contents of the container referred to in subregulation (1) are used within a normal workshift the employer shall ensure that the container is relabelled with the chemical name or the trade name as written on the original label.

(3) If the contents of the container referred to in subregulation (1) are chemicals used in a testing chemical laboratory the container shall be relabelled in accordance with subregulation (2), whether or not the contents are used within a normal workshift.

(4) Notwithstanding subregulations (1), (2) and (3), the container need not be relabelled if the chemical hazardous to health is used immediately.

(5) For the purpose of this regulation, "labelling" and "relabelling" means labelling or relabelling -

(*a*) in the case of a chemical hazardous to health, in accordance with the requirements of the Occupational Safety and Health (Classification, Packaging and Labelling of Hazardous Chemicals) Regulations 1997 [*P. U. (A) 143/97*];

(b) in the case of a pesticide, in accordance with the requirements of the Pesticides Act 1974 [Act 149]; or

(c) in the case of a schedule waste, in accordance with the requirements of the Environmental Quality (Schedule Wastes) Regulations 1989 [*P. U. (A) 139/89*].

Regulation 21. Relabelling.

(1) When a chemical hazardous to health is transferred to another container, other than that in which it was originally supplied, and the contents of that container are not used within a normal workshift, the employer shall ensure that the container is relabelled.

(2) If the contents of the container referred to in subregulation (1) are used within a normal workshift the employer shall ensure that the container is relabelled with the chemical name or the trade name as written on the original label.

(3) If the contents of the container referred to in subregulation (1) are chemicals used in a testing chemical laboratory the container shall be relabelled in accordance with subregulation (2), whether or not the contents are used within a normal workshift.

(4) Notwithstanding subregulations (1), (2) and (3), the container need not be relabelled if the chemical hazardous to health is used immediately.

(5) For the purpose of this regulation, "labelling" and "relabelling" means labelling or relabelling -

(a) in the case of a chemical hazardous to health, in accordance with the requirements of the Occupational Safety and Health (Classification, Packaging and Labelling of Hazardous Chemicals) Regulations 1997 [*P. U. (A) 143/97*];

(b) in the case of a pesticide, in accordance with the requirements of the Pesticides Act 1974 [Act 149]; or

(c) in the case of a schedule waste, in accordance with the requirements of the Environmental Quality (Schedule Wastes) Regulations 1989 [*P. U. (A) 139/89*].

PART VII - INFORMATION, INSTRUCTION AND TRAINING

Regulation 22. Information, instruction and training.

(1) An employer who undertakes work which may expose or is likely to expose his employees to chemicals hazardous to health shall provide the employees with such information, instruction and training as may be necessary to enable them to know -

(a) the risk to health created by such exposure; and

(b) the precautions which should be taken.

(2) Without prejudice to the generality of subregulation (1) , the information provided shall include

(a) information on the results of any monitoring of exposure at the place of work in accordance to regulation 26; and

(b) information on the collective results of any health surveillance programme undertaken in accordance with regulation 27 and presented in a manner which prevent them from being identified as relating to any particular person.

(3) The employer shall review and conduct the training programme -

(a) at least once in two years;

(b) if there is a change in the hazard information on the chemicals hazardous to health, safe work practices or control measures; or

(c) each time employees are assigned to new tasks or new work areas where they are exposed or likely to be exposed to chemicals hazardous to health.

(4) All training programmes shall be documented and kept for inspection by any occupational safety and health officer.

Regulation 23. Information, instruction and supervision of person.

Every employer shall ensure that any person and who carries out any work in connection with the employer's duties under these Regulations has the necessary information, instruction and supervision to carry out such duties.

Regulation 24. Chemical Safety Data Sheet.

An employer who receives a supply of chemicals hazardous to health for which the chemicals are not labelled or the Chemical Safety Data Sheets have not been provided, shall obtain the relevant information from the supplier and shall not use the chemicals until such information is obtained.

Regulation 25. Provision of Chemical Safety Data Sheet in a place of work.

In any place of work where a chemical hazardous to health is used, the current Chemical Safety Data Sheet for that chemical or a copy thereof shall be kept in a conspicuous place close to each location where that chemical is used, and shall be easily accessible to the employees.

PART VIII - MONITORING OF EXPOSURE AT THE PLACE OF WORK

Regulation 26. Monitoring of exposure.

(1) Where an assessment of risk to health indicates that monitoring of exposure is required or it is requisite for ensuring the maintenance of adequate control of the exposure of employees to chemicals hazardous to health, the employers shall ensure that the exposure of employees to chemicals hazardous to health is monitored in accordance with an approved method of monitoring and analysis.

(2) If an employee is exposed or likely to be exposed to chemicals hazardous to health listed in Schedule II, the monitoring of exposure of employees determined in subregulation (1) shall be repeated at intervals of not more than six months or at such shorter intervals as determined by the assessor and the monitoring of exposure shall continue at this frequency until such time the assessor is satisfied that further monitoring of exposure is no longer required.

(3) The monitoring of exposure shall be conducted by a hygiene technician unless the monitoring is confined to checking the presence of toxic or flammable gases and the level of oxygen in a confined space before entry.

(4) The employer shall maintain in good order and condition any record or summary of the record of any monitoring carried out for the purpose of these Regulations and shall be kept available -

(a) where the record is representative of the personal exposure of a personal exposed to any chemical hazardous to health, for at least thirty years; and

(b) in any other case, for at least five years.

PART IX - HEALTH SURVEILLANCE

Regulation 27. Health surveillance programme.

(1) Where an assessment indicates that health surveillance is necessary for the protection of the health of employees exposed or likely to be exposed to chemicals hazardous to health, the employer shall carry out a health surveillance programme.

(2) The medical surveillance component of the health surveillance programme in subregulation (1) shall be carried out by an occupational health doctor.

(3) If an employee is exposed or likely to be exposed to chemicals hazardous to health listed in Schedule II, the health surveillance required under subregulation (1) shall include medical surveillance conducted at intervals of not more than twelve months or at such shorter intervals as determined by the occupational health doctor or an occupational safety and health officer who is also a medical practitioner.

(4) The employer shall ensure that the health surveillance record or a copy thereof is maintained in good order and condition and kept for a period of thirty years from the date of the last entry made in it.

(5) The employer shall make available upon request all records required to be maintained under subregulation (3) to the Director General for examination and inspection.

(6) The employer shall, after a reasonable notice being given, allow any of his employees access to the health surveillance record which relates to the employee.

PART X - MEDICAL REMOVAL PROTECTION

Regulation 28. Medical removal protection.

(1) The employer shall not permit an employee to be engaged in and shall remove him from any work that exposes or likely to expose him to chemicals hazardous to health on each occasion that the medical finding, determination or opinion expressed by an occupational safety and health officer who is also a medical practitioner or by an occupational health doctor shows that the employee has a detected medical condition which places him at increased risk of material impairment to health from exposure to chemicals hazardous to health.

(2) The employer, after being notified by an occupational safety and health officer who is also a medical practitioner or an occupational health doctor of the fact, shall not permit a pregnant employee or breastfeeding employee to be engaged in, and shall remove the employee from work which may expose or is likely to expose the employee to chemicals hazardous to health.

(3) The employer shall return an employee to his former job -

(a) for an employee removed in accordance with subregulation (1), when a subsequent medical determination results in a medical finding, determination or opinion which shows that the employee no longer has the detected medical condition; or

(b) for an employee removed in accordance with subregulation (2), at the appropriate time where the employee is no longer pregnant or breastfeeding a child.

(4) For the purpose of this regulation, "medical practitioner" means a medical practitioner registered under the Medical Act 1971 [*Act 50*].

PART XI - WARNING SIGN

Regulation 29. Warning sign.

(1) Where a chemical hazardous to health is used in any area in any manner that is hazardous to the health of any person who may be in that area or who may be or is likely to be at risk of being affected by the chemicals hazardous to health, the employer shall ensure that -

(a) warning signs are posted at a conspicuous place at every entrance of the area to warn persons entering the area of the hazards; and

(b) other relevant information are given to persons who may be or are likely to be at risk of being affected by the chemicals hazardous to health.

(2) The employer shall ensure that the warning signs required by these Regulations are illuminated and cleaned as necessary so that the legend is readily visible.

(3) For the purpose of subregulation (1), the warning shall -

(a) give warning of the hazards;

- (b) be written in the national language and English language; and
- (c) be printed in dark red against white background.

PART XII - RECORD KEEPING

Regulation 30. Retention of records by employer.

(1) Whenever an employer ceases to carry on business and another person succeeds him, the employer ceasing business shall hand over, and the successor employer shall retain, all records to be maintained under regulations 13, 19, 22, 26 and 27.

(2) Whenever an employer ceases to carry on business and no person succeeds him, the employer shall transmit the records required to be maintained under regulations 13, 19, 22, 26 and 27 to the Director General.

(3) At the expiration of the retention period for the records required to be maintained under regulations 13, 26 and 27 the employer shall give the Director General at least three months notice in writing that he intends to dispose of such records, and he shall transmit those records to the Director General, if requested to do so within that period.

SCHEDULE I

(Regulations 6 and 7)

LIST OF PERMISSIBLE EXPOSURE LIMITS

CHEMICAL	[CAS]	average	our time-weighted	Ceiling airborn concent	e
		ppm	mg/m ³	ppm	mg/m³
Acetaldehyde	[75-07-0]			25	45
Acetic acid	[64-19-7]	10	25		
Acetic anhydride	[108-24-7]	5	21		
Acetone	[67-64-1]	.500	1187		
Aceton cyanohydrin	[7 5-86- 5]			4.7	5
as CN- (skin)					
Acctonitrile	[75-05-8]	40	67		
Acctophenone	[98-66-2]	10	49		
Acetylenedichloride, see 1, 2-Di	choloroethylene				
Acctylenc tetrabromide	[79-27-6]	1	14		
Acetylsalicylic acid	[50-78-2]	—	5 ·		
(asprin)					
Acrolein- (skin)	[107-02-8]	_	-	0.1	0.23
Acrylamide- (skin)	[79-06 -1]	—	0.03		
Acrylic acid- (skin)	[79-10-7]	2	5.9		
Acrylonitrile- (skin)	[107-13-1]	2	4.3		
Adipic acid	[124-04-9]		5		
Adiponitrile- (skin)	[111-69-3]	2	8.8		
Aldrin	[309-00-2]	—	0.25		

CHEMICAL	[CAS]	average	ur time-weighted	airborne concentration
		ppm	mg/m³	ppm mg/m ³
Allyl alcohol- (skin)	[107-18-6]	0.5	1.2	
Allyl chloride	[107-05-1]	1	3	
Allyl glycidyl ether (AGE)	[106-92-3]	1	4.6	
Allyl propyl disulfide	[2179-59-1]	2	12	
-Alumina, see Aluminium ox				
Alnminium	[7429-90-5]			
Metal dust	•	_	10	
Pyro powders, as Al			5	
Welding fumes, as Al		_	5	
Solube salts, as Al	1.1	_	2	
Alkyls (NOC), as Al		_	2	
Aluminium oxide	[1344-28-1]	_	—	lue is for particulate
			matter asbesto	containing no
4-Aminodiphenyl- (skin)	[92-67-1]	—	_	
2-Aminoethanol, acc Ethanolat	mine			
2-Aminopyridine	[504-29-0]	0.5	1.9	
3-Amino-1, 2, 4-triazole, see	Amitrole			
Amitrole	[61-82-5]	—	0.2	
Ammonia	[7664-41-7]	25	17	
Ammonium chloride fume	[12125-02-9]		10	
Ammonium	[3825-26-1]	_	0.01	
perfluorooctanoate- (skin)				
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 and homologues- (skin)	[62-53-3]	2	7.6	,
o-Anisidine- (skin)	[90-04-0]	0.1	0.5	
p-Anisidine- (skin)	[104-94-9]	0.1	_	
Antimony and compound, as Sb	[7440-36-0]	_	0.5	
Antimony trioxide production	[130 9-64-4]	-	-	
ANTU	[86-88-4]	_	0.3	
Arsenic, elemental and inorganic compounds (exce	[7440-38-2]	-	0.01	
Arsine	[7784-42-1]	0.05	0.16	
Asbestos, all forms	[1332-21-4]	_	0.1 f/ml	
except crocidolite				
Asphalt (petroleum) fumes	[8052-42-4]		5	
Atrazine	[1912-24-9]	_	5	
Azinphos-methyl- (skin)	[86-50-0]	<u> </u>	0.2	-
Barium, and soluble	[7440-39-3]		0.5	-
compounds, as Ba	-			

4	verage		-	Ceiling li airborne concentra	
J	ppm	mg/i	n'	ppm 1	ng/m³
-43-7]		10	matter c	ontaining 1	00
14-35-2]		10			
5-3]	_	—		•	
3-2]	0.5	1.6			
7-5]	_	_			
99-2]	_	_			
7-7]				0.1	—
8-4]			(0.5	2.8
6-0]	_	5			
2-8]	_	_			
11-4]	10	61			
44-7]	1	5.2			
-41-7]		0.002			
2-4]	0.2	1.3			
-82-1]		10			
	_	5			
-96-4]					
		1			
	-	5			
	_	1			
-86-2]	_	10			
4-33-4]				1	10
				1	2.8
40-9]	_	10			
-95-6]	0.1	0.66			
-30-2]	0.1	0.72			
methane					
5-2]	0.5	5.2			
	2	4.4			
97-8]	800	1900			
-					
6-3]			2	50	152
-	100	303			
5-0]	100	303			
	20	96.7			
	4	average airborne ppm 7-43-7] 14-35-2] 5-3] 3-2] 0.5 7-5] 99-2] 7-7] 8-4] 6-0] 2-8] 11-4] 10 44-7] 1 99-2] 7-71 8-4] 6-0] 2-8] 11-4] 10 44-7] 1 99-64]	airborne concent ppm mg/n 7-43-7] 10 14-35-2] 10 5 5-3] 3-2] 0.5 1.6 7-5] 3-2] 0.5 1.6 7-5] 99-2] 777] 8-4] 6-0] 5 2-6] 11-4] 10 61 44-7] 1 5.2 99-2] 0.002 2-4] 0.2 1.3 482-1] 10 5 -96-4] 1 5 10 482-1] 10 1 5 1 5 10 10 >- 1 <t< td=""><td>airborne concentration ppm mg/m³ 7-43-7] 10 The value matter or asbestos stilica. 14-35-2] 10 5-3] 3-2] 0.5 1.6 3-2] 0.5 1.6 3-2] 0.5 1.6 77-7] 74-43-7] 3-2] 0.5 1.6 65-3] 99-2] 77-7] 76-0] 5 14-41 10 61 44-7] 1 5.2 </td><td>average airborne concentration airborne concentration airborne concentration ppm mg/m³ ppm n 7-43-7] 10 The value is for para matter containing i asbestos and <1% c silica. 44-35-2] 10 5-31 3-21 0.5 1.6 3-21 0.5 1.6 7-71 0.1 6-0 7-71 0.1 6-0 7-71 0.1 6-0 744-7] 1 5.2 7771 0.2 1.3 744-7] 1 5.2 11-4] 10 61 1442-1] 5 1 1482-1] 1 5 1 1486-2] 10 1 1 140-9] <td< td=""></td<></td></t<>	airborne concentration ppm mg/m³ 7-43-7] 10 The value matter or asbestos stilica. 14-35-2] 10 5-3] 3-2] 0.5 1.6 3-2] 0.5 1.6 3-2] 0.5 1.6 77-7] 74-43-7] 3-2] 0.5 1.6 65-3] 99-2] 77-7] 76-0] 5 14-41 10 61 44-7] 1 5.2	average airborne concentration airborne concentration airborne concentration ppm mg/m ³ ppm n 7-43-7] 10 The value is for para matter containing i asbestos and <1% c silica. 44-35-2] 10 5-31 3-21 0.5 1.6 3-21 0.5 1.6 7-71 0.1 6-0 7-71 0.1 6-0 7-71 0.1 6-0 744-7] 1 5.2 7771 0.2 1.3 744-7] 1 5.2 11-4] 10 61 1442-1] 5 1 1482-1] 1 5 1 1486-2] 10 1 1 140-9] <td< td=""></td<>

CHEMICAL	[CAS]	average	ur time-w concentre	-	airborne		
		ppm	നള/ന്	1	ppm	mg/m ³	
-Butyl acctate	[123-86-4]	150	713				
cc-Butyl acetate	[105-46-4]	200	950				
ert-Butyl acetate	[540-88-5]	200	950				
1-Butyl acrylate	[141-32-2]	2	10.48				
-Botylamine- (skin)	[109-73-9]				5	15	
ert-Butyl chromates, as CrO ₃ -(skin)	[1189-85-1]					0.1	
-Butyl glycidyl ether (BGE)	[2426-08-6]	25	133				
Butyl lactate	[138-22-7]	5	30				
-Butyl mercaptan	[109-79-5]	0.5	1.8				
-see Butylphenol- (skin)	[89-72-5]	5	31				
tert-Butyl toluene	[98-51-1]	1	6.1				
Cadmium, elemental and	[7440-43-9]	_	0.01			•	
compounds, as Cd	[///0/07]	_	0.002	Respira	ible fract	ion.	
Calcium carbonate	[1317-65-3]	_	10	The val matter o	ue is for containin	particulate g no asbestos	
Calcium chromate, as Cr	[13765-19-0]		0.001		% CTYSIA	line silica.	
alcium cyanamide	[15765-19-0]	_	0.5				
alcium bydroxide	[1305-62-0]	_	5				
alcium oxide	[1305-78-8]	_	2				
Calcium silicate	[1344-95-2]	_	10	The vel	ine is for	particulate	
(synthetic)	[1344-33-2]		10	matter (containin	g no asbestos line silica.	
Calcium sulfate	[7778-18-9]	-	10	matter (containin	particulate g no asbestos line silica.	
Complex conthetic	[76-22-2]	2	12		N CLYSLA		
Camphor, synthetic Caprolactam	[105-60-2]	-					
Particulate	[100-00-2]	_	1				
Vapor		5	23				
vapor Captafol- (skin)	[2425-06-1]	_	0.1				
aptanor- (akin) Captan	[133-06-2]	_	5				
arbaryl	[63-25-22]	_	5				
arbofuran	[1563-66-2]		0.1				
Carbon black	[1333-86-4]	_	3.5				
Carbon dioxide	[124-38-9]	5000	9000				
Carbon disulfide- (skin)	[75-15-0]	10	31				
Carbon monoxide	[630-08-0]	25	29				
Carbon tetrabromide	[558-13-4]	0.1	1.4				
arbon tetrachloride	[56-23-5]	5	31				
(Tetrachloromethane)- (skin)	[20-20-2]	-					
Carbonyl chloride, see Phosgene							
Carbonyl fluoride	[353-50-4]	2	5.4				
Catechol- (skin)	[120-80-9]	5.	23				
Cellulose	[9004-34-6]		10				
Cesium hydroxide	[21351-79-1]	_	2				

CHEMICAL	[CAS]	average	ur time-weighted concentration	airborn	
		ppm	mg/m ³	ppm	mg/m³
Chlorinated camphene (Toxaphene)- (skin)	[8001-35-2]	-	0.5		
o-Chlorinated diphenyl oxide	[31242-93-0]	—	0.5		
Chlorine	[7782-50-5]	0.5	1.5		
Chlorine dioxide	[10049-04-4]	0.1	0.28	•	
Chlorine trifluoride	[7790-91-2]			0.1	0.38
Chloroacetaldehyde- (skin)	[107-20-0]			1	3.2
Chloroacetone- (skin)	[78-95-5]			1	3.8
2-Chloroacetophenone	[532-27-4]	0.05	0.32		
Chloroacetyl chloride- (skin)	[79-04-9]	0.05	0.23		
o-Chjorobenzylidene	[2698-41-1]			0.05	0.39
malononitrile- (skin)	[108-90-7]	10	46		
Chlorobenzene	[74-97-5]	200	40 1060		
Clorobromomethane	•	200	1000		
2-Chloro-1, 3-butadiene, see β-Cl Chlorodifluoromethane	[74-45-6]	1000	3540		
Chlorodiphenyl	[53469-21-9]	1000	1		
(42% chlorine)- (skin)	[00409-21-9]	_	•		
(42% chlorine)- (akin) (54% chlorine)- (skin)	[11097-69-1]	_	0.5		
1-Chloro-2, 3-epoxy propane, see	Eoichlorehydri	n			
2-Chloroethanol, see Ethylene ch		-			
Chloroethylene, see Vinyl chlorid	-				
Chloroform	[67-63-3]	10	49		
bis (Chloromethy) ether	[542-88-1]	0.001	0.0047		
Chloromethyl methyl ether	[107-30-2]		_		
1-Chloro-1-nitropropane	[600-25-9]	2	10		
Chloropentafluoroethane	[76-15-3]	1000	6320		
Chloropicrin	[76-06-2]	0.1	0.67		
β-Chloroprene- (skin)	[126-99-8]	10	36		
2-Chloropropionic acid- (skin)	[598-78-7]	0 .1	0.44		
o-Chlorostyrene	[2039-87-4]	50	283		
o-Chlorotoluene	[95-49-8]	50	259		
2-Chloro-6-(trichloromethyl) pyr	idine, see Nitapy	rcin			
Chlorpyrifos - (skin)	[2921-88-2]	_	0.2		
Chromite ore processing (Chrom as Cr	ate),	-	0.05		
Chromium, metal and inorganic compounds, as Cr	[7440-47-3]				
Metal and Cr III compounds,		_	0.5		
Water-soluble Cr VI compour		_	0.05		
Insoluble Cr VI compounds, I		_	0.01		
Chromyl chloride	[14977-61-8]	0.025	0.16		
Chrysene	[218-01-9]	—	—		

CHEMICAL	[CAS]	Average airborns		airborne concentrat	
		ppm	mg/m³	ppm	D
Chrysotile, see Asbestos					
Clopidol	[2971-90-6]	_	10		
Coal dust					
Anthracite		_	0.4 Respiral	le fraction.	
Bituminous		_	0.9 Respiral	ele fraction.	
Coal tar pitch volatiles, as benzene solubles	[65996-93-2]	-	0.2		
Cobat, clemental and	[7440-48-4]	-	0.02		
inorganic compounds, as Co					
Cobalt carbonyl, as Co	[10210-68-1]	_	0.1		
Cobalt hydrocarbonyl,	[16842-03-8]	_	0.1		
as Co					
Copper	[7440-50-8]				
Fume .			0.2		
Dusts & mists, as Cu		_	1		
Cotton dust, raw			0.2		
Cresol, all isomers- (skin)	[1319-77-3]	5	22		
Cristobalite, see Silica- Crystall	line				
Crocidolite, see Asbestos					
Crotonaldehyde- (skin)	[4170-30-3]			0.3	
Crufomate	[299-86-5]	_	5		
Cumene- (skin)	[98-82-8]	50	246		
Cyanamide	[420-04-2]	-	2		
Cyanogen	[460-19-5]	10	21		
Cyanogen chloride	[506-77-4]			0.3	
Cyclohexane	[110-82-7]	300	1030		
Cyclohexanol- (skin)	[108-93-0]	50	206		
Cyclohexanone- (skin)	[108-94-1]	25	100		
Cyclohexene	[110-83-8]	300	1010		
Cyclohexylamine	[108-91-8]	10	41		
Cyclonite- (skin)	[121-82-4]	_	0.5		
Cyclopentadiene	[542-92-7]	75	203		
Cyclopentane	[287-92-3]	600	1720		
Cybexatin	[13121-70-5]	—	5		
2, 4-D	[94-75-7]	—	10		
DDT	[50-29-3]	—	1		
(Dichlorodiphenyltrichloroe					
Decaborane- (skin)	[17702-41-9]	0.05	0.25		
Demeton- (skin)	[8065-48-3]	0.01	0.11		
Diacetone alcohol	[123-42-2]	50	238		
1, 2-Diaminoethane, see Ethyler					
Diatomaceous earth, see Silica A	-				
Diazinon- (skin)	[333-41-5]	_	0.1		
Diazomethane	[334-88-3]	0.2	0.34		
Diborane	[19287-45-7]	0,1	0.11		
1, 2-Dibromoethane, see Ethyle					
2-N-Dibutylaminoethanol- (skin)	[102-81-8]	0.5	3.5		

CHEMICAL	[CA\$]	average	or time-weighted	Ceiling airborn concea	ic
		ppm	mg/m³	ppm	mg/m³
Dibutyl phenyl phosphate- (skin)	[2528-36-1]	0.3	3.5		
Dibutyl phosphate	[107-66-4]	1	8.6		
Dibutyl phthalate	[84-74-2]	_	5		
Dichloroacetylene	[7572-29-4]			0.1	0.39
o-Dichlorobenzene	[95-50-1]	25	150		
p-Dichlorobenzene	[106-46-7]	10	60		
3, 3'-Dichlorobenzidine- (skin)	[91 -94 -1]	_	_		
1, 4-Dichloro-2-butene-	[764-41-0]	0.005	0.025		
(skin)					
Dichlorodiflooromethane	[75-71-8]	1000	4950		
1, 3-Dichloro-5, 5-dimethyl	[118-52-5]	_	0.2		
hydantoin					
1, 1-Dichloroethane	[75-34-3]	100	405		
1, 2-Dichloroethane, see Ethylen	e dichloride				
1, 1-Dichloroethylene, see Vinyl	idene chloride				
1, 2-Dichloroethylene	[540-59-0]	200	793		
Dichloroethyl ether- (skin)	[111-44-4]	5	29		
Dichlorofluoromethane	[75-43-4]	10	42		
Dichloromethane	[75-09-2]	50			
1, 1-Dichloro-1-nitroethane	[594-72-9]	2	12		
1, 2,-Dichloropropane, see Propy	lene dichloride				
1, 3-Dichloropropene- (akin)	[542-75-6]	1	4.5		
	• [75-99-0]	1	5.8		
Dichlorotetrafluoroethane	[76-14-2]	1000	6990		
Dichlorvos- (skin)	[62-73-7]	0.1	0.90		
Dicrotophos- (skin)	[141-66-2]	_	0.25		
Dicyclopentadiene	[77-73-6]	5	27		
Dicyclopentadienyl iron	[102-54-5]		10		
Dieldrin- (skin)	[60-57-1]		0.25		
Diethanolamine- (skin)	[111-42-2]	0.46	2		
Diethylamine- (skin)	[109-89-7]	5	15		
2-Diethylaminoethanol-	[100-37-8]	2	9.6		
(skin)					
Dicthylene triamine- (skin)	[111-40-0]	1	4.2		
Diethyl ether, see Ethyl ether					
Di (2-ethylhexyl) phthalate (DEHP)	[11 7-81-7]	—	5		
Diethyl ketone	[96-22-0]	200	705		
Diethyl phthalate	[84-66-2]		5		
Difluorodibromomethane	[75-61-6]	100	858		
Diglycidyl ether (DGE)	[2238-07-5]	0.1	0.53		
Dihydroxybenzene, see Hydrogr	-	311			
Diisobutyl ketone	[108-83-8]	25	145		
Diisopropylamine- (skin)	[108-18-9]	5	21		
purphopymanne (ana)	[100.10.1]	•			

CHEMICAL	[CAS]	Eight-ho average airborne		e-weighted ntration	Ceiling airborn concen	c
		ppm	mg	y∕m³	ррт	mg/m³
Dimethoxymethane, see Methylal	l					
N, N-Dimethylacetamide-	[127-19-5]	10	36			
(skin)						
Dimethylamine	[124-40-3]	5	9.2			
Dimethylaminobenzene, see Xylia	dene					
Dimethylaniline	[121-69-7]	5	25			
(N, N-Dimethylaniline)- (skin)					
Dimethybenzene, see Xylene						
Dimethyl carbamoyl chloride	[79-44-7]	_	—			
Dimethyl-1, 2-dibromo-2, 2-dichl	oroethyl phosph	ate, see N	alcd			
Dimethylethoxysilane	[14857-34-2]	0.5	—			
Dimethylformamide- (skin)	[68-12-2]	10	30			
2, 6-Dimethyl-4-heptanone, see D	iisobutyl ketone	:				
1, 1-Dimethylhydrazine-	[57-14-7]	0.01	0.02	5		
(skin)						
Dimethylnitrosoamine, see N-Nit	rosodimethylami	ine				
Dimethylphthalate	[131-11-3]	_	5			
Dimethyl sulfate- (skin)	[77-78-1]	0.1	0.52			
Dinitolmide	[148-01-6]	_	5			
Dinitrobenzene	[528-29-0;	0.15	1.0			
(all isomers)- (skin)	99-65-0; 100-2	5-4]				
Dinitro-o-cresol- (skin)	[534-52-1]	_	0.2			
3, 5-Dinitro-o-toluamide, see Din	itolmide					
Dinitrotoluene- (skin)	[25321-14-6]	_	0.2			
1, 4-Dioxane- (skin)	[123-91-1]	20	72.1			
Dioxathion- (skin)	[78-34-2]	_	0.2			
Diphenyl, see Biphenyl						
Diphenylamine	[122-39-4]	_	10			
Diphenylmethane diisocyanate, se	e Methylene bis	phenyl iso	cyana	te		
Dipropylene glycol methyl	[34590-94-8]	100	606			
ether- (skin)						
Dipropyl ketone	[123-19-3]	50	233			
Diquat- (skin)	[2764-72-9]	_	0.5			
•		_	0.1	Respirable	fraction.	
Di-sec-octyl phthalate, see Di (2-	ethylhexy) phtha	late				
Disulfiram	[97-77-8]	_	2			
Disulfoton- (skin)	[298-04-4]	_	0.1			
2, 6-Di-tert-hutyl-p-cresol	[128-37-0]		10			
[Butylated hydroxytoluene (B)	HT)]					
Diuron	[330-54-1]	_	10			
Divinyl benzene	[1321-74-0]	10	53			
Emery	[1302-74-5]	_	10			culate matter
				containing : <1% crysta		
Endosulfan- (skin)	[115-29-7]	_	0.1			
Endrin- (skin)	[72-20-8]	_	0.1			
Enflucane	[13838-16-9]	75	566			
Enzymes, see Subtilisins						

	-	average	ur time-weighted	Ceiling limit airborne concentration		
		ppm	mg/m ³	ppm	mg/a	
Bpichlerohydrin- (skin)	[108-89-8]	0.5	1.9		5	
EPN- (skin)	[2104-64-5]	—	0.1			
1, 2-Epoxypropane, see Propylene	e oxide					
2, 3-Epoxy-1-propanel, see Glycid						
Ethanethiol, see Ethyl mercaptan						
Ethanol	[64-17-5]	1000	1880			
Ethanolamine	[141-43-5]	3	7.5			
Ethion- (skin)	[563-12-2]		0.4			
2-Ethoxyethanol (EGEE)-	[110-80-5]	5	18			
(skin)						
2-Bthoxyethyl acetate	[111-15-9]	5	27			
(EGEEA)- (skin)	[
Ethyl acetate	[141-78-6]	400	1440			
Ethyl acrylate	[140-88-5]	5	20			
Ethyl alcohol, see Ethanol	[140-00-0]					
Ethylamine- (skin)	[75-04-7]	5	9.2			
	[541-85-5]	25	131			
Ethyl amyl ketone	[100-41-4]	100	434			
Ethyl benzene		5	434 22			
Ethyl bromide- (skin)	[74-96-4]	-	234			
Ethyl butyl ketone	[106-35-4]	50				
Ethyl chloride- (skin)	[75-00-3] [72996_96_01	100	264			
Ethyl cyanoacrylate	[7085-85-0]	0.2	_	1		
Ethylene chlorohydrin- (skin)	[107-07-3]			1	3.3	
Ethylenediamine- (skin)	[107-15-3]	10	25			
Ethylene dibromide- (skin) 💦 👡	[106-93-4]					
Ethylene dichloride	[107-06-2]	10	40			
Ethylene glycol, aerosol	[107-21-1]			39.4	10	
Ethylene glycol dinitrate- (skin)	[628-96-6]	0.05	0.31			
Ethylene glycol methyl ether acet	tate, see 2-Metho	oxyethyl a	cetate			
Ethylene oxide	[75-21-8]	1	1.8			
Ethylenimine- (skin)	[151-56-4]	0.5	0.88			
Ethyl ether	[60-29-7]	400	1210			
Ethyl formate	[109-94-4]	100	303			
Ethylidene chloride, see 1,1-Dich	loroethane					
Ethylidene norbornene	[16219-75-3]			5	25	
Ethyl mercaptan	[75-08-1]	0.5	1.3			
N-Ethylmorpholine- (skin)	[100-74-3]	5	24			
Ethyl silicate	[78-10-4]	10	85			
Fenamiphos- (skin)	[22224-92-6]	_	0.1			
Fensulfothion	[115-90-2]	_	0.1		,	
Fenthion- (skin)	[55-38-9]	_	0.2			
Ferbam	[]4484-64-1]	_	10			
Ferrovanadium dust	[12604-58-9]	_	1			
Fibrous glass dust, see Synthetic		s — Con	-	lass filv	ers.	
Fluorides, as F			2.5			
	[7782-41-4]	1	1.6			

CHEMICAL

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		average			airborn	
		airborne	concent		CONCER	tration
		ррт	mg/i	n 3	ppm	mg/m³
Fluorotrichloromethane, see Tric	hlorofluorometh	але			5	
Fonofos- (skin)	[944-22-9]	_	0.1			-
Formaldebyde	[50-00-0]				0.3	0.37
Formamide- (skin)	[75-12-7]	10	18			
Formic acid	[64-18-6]	5	9.4			
Furfural- (skin)	[98-01-1]	2	7.9			
Farfuryl alcohol- (skin)	[98-00-0]	10	40			
Gasoline	[8006-61-9]	300	890			
Germanium tetrahydride	[7782-65-2]	0.2	0.63			
Glass, fibrous or dust, see Synth	etic Vitreous F	ibers				
Glutaraldehyde, activated and inactivated	[111-30-8]				0.05	0.21
Glycerin mist	[56-81-5]		10			
Glycidol	[556-52-5]	2	6.1			
Glycol monoethyl ether, see 2-E	thoxyethanol					
Grain dust (oat, wheat, barley)		-	4	The value	is for	particulate
						no asbestos
					-	lline silica.
Graphite (all forms except graphite fibres)	[7782-42-5]	-	2	Respirabl	e fractio	00.
Gypsum, see Calcium sulfate						
Hafnium	[7440-58-6]	_	0.5			
Halothane	[151-67-7]	50	404			
Heptachlor- (skin)	[76-44-8]	-	0.05			
Heptachlor epoxide- (skin)	[1024-57-3]	-	0.05			
Heptane (n-Heptane) 👘 🐄	[142-82-5]	400	1640			
2-Heptanone, see Methyl n-amyl						
3-Heptanone, see Ethyl butyl ke						
Hexachlorobenzene- (skin)	[118-74-1]	—	0.002			
Hexachlorobutadiene- (skin)	[87-68-3]	0.02	0.21			
Hexachlorocyclopentadiene	[77-47-4]	0.01	0.11			
Hexachloroethane- (skin)	[67-72-1]	1	9.7			
Hexachloronaphthalene- (skin)	[1335-87-1]	-	0.2			
Hexafinoroacetone- (skin)	[684-16-2]	0.1	0.68			
Hexamethylene diisocyanate	[822-06-0]	0.005	0.034			
Hexamethyl phosphoramide	[680-31-9]	_				
n-Hexane- (skin)	[110-54-3]	50	176			
Hexane, Other isomers		500	1760			
1, 6-Hexanediamine	[124-90-4]	0.5	2.3			
2-Hexanone, see Methyl n-butyl	ketone				:	
1-Hexene	[592-41-6]	· 30				
sec-Hexyl acetate	[108-84-9]	50	295			
Hexylene glycol	[107-41-5]				25	121
Hydrazine- (skin)	[302-01-2]	0.01	0.013			
Hydrogenated terphenyls	[61788-32-7]	0.5	4.9			
(nonirradiated)						

CHEMICAL	[CAS]	average	ur time-weighted concentration		Ceiling limit airborne concentration	
		ррт	mg/r	m3	ррт	mg/m³
Hydrogen brumide	[10035-10-6]				3	9.9
Hydrogen chloride	[7647-01-0]				5	7.5
Hydrogen cyanide and cyanide se	lits as CN					
Hydrogen cyanide- (skin)	[74-90-8]				4.7	5
Calcium cyanide- (skin)	[592-01-8]				_	5
Potassium cyanide- (skin)	[151-50-8]					5
Sodium cyanide- (skin)	[143-33-9]					5
Hydrogen fluoride, as F	[7664-39-3]				3	2.3
Hydrogen peroxide	[7722-84-1]	1	1.4			
Hydrogen seleninde, as Se	[7783-07-5]	0.05	0.16			
Hydrogen sulfide	[7783-06-4]	10	14			
Hydroquinone	[123-31-9]	—	2			
4-Hydroxy-4-methyl-2-pentanone,	see Diacetone	alcohol	-			
2-Hydroxypropyl acrylate- (skin)	[999-61-1]	0.5	2.8			
Indene	[95-13-6]	10	48			
Indium & compounds, as In	[7440-74-6]		0.1	•		
Iodine	[7553-56-2]				0.1	1.0
Iodoform	[75-47-8]	0.6	10			
Iron oxide dust & fome (Fe ₂ O ₃), as Fc	[13 09-37-1]	2	5		nteining	particulate ao asbestos ne silica.
Iron pentacarbonyl, as Fe	[13463-40-6]	0.1	0.23		-	
Iron salts, soluble, as Fe		_	1			
Isoamyl acctate	[123-92-2]	100	532			
-	[123-51-3]	100	361			
Isobutyl acctate	[110-19-0]	150	713			
Isobutyl alcohol	[78-83-1]	50	152			
Isooctyl alcohol- (skin)	[26952-21-6]	50	266			
Isophorone	[78-59-1]				5	28
Isophorone diisocyanate	[4098-71-9]	0.005	0.045			
2-Isopropoxyethanol-(skin)	[109-59-1]	25	106			
Isopropyl acctate	[108-21-4]	250	1040			
Isopropyl alcohol	[67-63-0]	400	983			
Isopropylamine	[75-31-01]	5	12			
N-Isopropylaniline- (skin)	[768-52-5]	2	11			
Isopropyl ether	[108-20-3]	250	1040			
Isopropy) glycidyl ether (IGE)	[4016-14-2]	50	238			
Kaolin	[1332-58-7]	_	2		ntaining crystalli	
Ketene	[463-51-4]	0.5	0.86			
Lead, elemental and	[7439-92-1]		0.05			
inorganic compounds, as Pb ₃						
Lead arsenate, as Pb, (AsO ₂) ₂	[7784-40-9]		0.15			

CHEMICAL	[CAS]	Eight-ho average airborne		weighted	airborn	
		ppm	mgh	D 3	ррт	mg/m ³
Lead chromate	[7758-97-6]				5	
as Pb		—	0.05			
as Cr			0.012			
Limestone, see calcium carbonat						
Lindane- (skin)	[58-89-9]	_	0.5			
Lithuim hydride	[7580-67-8]	—	0.025			
L.P.G. (Liquified	[68476-85-7]	1000	1800			
petroleum gas)						
Magnesite	[546-93-0]	_	10	matter co	ntaining	particulate no asbestos inc silica.
Magnesium oxide fume	[1309-48-4]		10		•	
Malathion- (skin)	[121-75-5]	_	10			
Maleic anhydride	[108-31-6]	0.25	1.0			
Manganese, elemental and	[7439-96-5]	_	0.2			
inorganic compounds, as Mn						
Manganese cyclopentadienyl	[12079-65-1]	<u> </u>	0.1			•
tricarbonyl, as Mn- (skin)						
Marble, see Calcium carbonate						
Mercury, as Hg- (skin)	[7439-97-6]					
Alkyl compounds		_	0.01			
Aryl compounds		_	0.1			
Inorganic forms including me	tallic	_	0.025			
mercury						
Mesityl oxide	[141-79-7]	15	60			
Methacrylic acid	[79-4 1-4]	20	70			
Methanethiol, see Methyl mercay	tan					
Methanol- (skin)	[67-56-1]	200	262			
Methomyl	[16752-77-5]	—	2.5			
Methoxychlor	[72-43-5]	_	10		-	
2-Methoxyethanol (EGME)	[109-86-4]	5	16			
2-Methoxyethyl acetate (EGMEA)- (skin)	[110-49-6]	5	24			
4-Methoxyphenol	[150-76-5]	_	5			
Methyl acetate	[79-20-9]	200	606			
Methyl acetylene	[74-99-7]	1000	1640			
Methyl acetylene-propadiene		1000	1640			
mixture (MAPP)						
Methyl acrylate- (skin)	[96-33-3]	2	7			
Methylacrylonitrile- (skin)	[126-98-7]	1	2.7			
Methylal	[109-87-5]	1000	3110			
Methyl alcohol, see Methanol						
Methylamine	[74-89-5]	5	6.4			
Methyl amyl alcohol, see Methyl	isobutyl carbin	ol				
Methyl n-amyl ketone	[110-43-0]	50	233			
N-Methyl aniline- (skin)	[100-61-8]	0.5	2.2			

CHEMICAL	[CAS]	average	ur time-weighted concentration	airborn	
		ppm	mg/m³	ppm	mg/m³
Methyl bromide- (skin)	[74-83-9]	1	3.8		
Methyl-tert-butyl ether	[1634-04-4]	40	144		
Methyl n-butyl ketone	[591-78-6]	5	20		
Methyl chloride- (skin)	[74-87-3]	50	103		
Methyl chloroform	[71-55-6]	350	1910		
Methyl 2-cyanoacrylate	[137-05-3]	0.2	4.55		
Methylcyclohexane	[108-87-2]	400	1610		
Methylcyclohexanol	[25639-42-3]		234		
	[583-60-8]	50	229		
o-Methylcyclohexanone	[363-00-6]	30	227		
(skin) 2-Methylcyclopentadienyl	[12108-13-3]	_	0.2		
manganese tricarbonyl, as M	n- (skin)				
Methyl demeton- (skin)	[8022-00-2]	-	0.5		
Methylene bisphenyl	[101-68-8]	0.005	0.051		
isocyanate (MDI)					
Methylene chloride, see Dichlor	omethane				
4, 4'-Methylene bis	[101-14-4]	0.01	0.11		
(2-chloroaniline)[MOCA; MI	BOCA]- (skin)				
Methylene bis (4-cyclo	[5124-30-1]	0.005	0.054		
hexylisocyanate)					
4, 4'-Methylene dianiline-	[101-77-9]	0.1	0.81		
(skin)					
Methyl ethyl ketone (MEK)	[79-93-3]	200	590		
Methyl ethyl ketone	[1338-23-4]			0.2	1.5
peroxide	a-				
Methyl formate	[107-31-3]	100	2 46		
5-Methyl-3-heptanone, see Ethyl	amyl ketone				
Methyl hydrazine- (skin)	[60-34-4]	0.01	0.019		
Methyl iodide- (skin)	[74-88-4]	2	12		
Methyl isonmyl ketone	[110-12-3]	50	234		
Methyl isobutyl carbinol-	[108-11-2]	25	104		
(skin)					
Methyl isobutyl ketone	[108-10-1]	50	205		
Methyl isocyanate- (skin)	[624-83-9]	0.02	0.047		
Methyl isopropyl ketone	[563-80-4]	200	705		
Methyl mercaptan	[74-93-1]	0.5	0.98		
Methyl methacrylate	[80-62-6]	100	410		
Methyl parathion- (skin)	[298-00-0]	_	0.2		
Methyl propyl ketone	[107-87-9]	200	705		
Methyl silicate	[681-84-5]	1	6		
α-Methyl styrene	[98-83-9]	50	242		
Methyl vinyl ketone- (skin)	[78-94-4]			0.2	—
Metribuzin	[20187-64-9]	_	5		
Mevinphos- (skin)	[7786-34-7]	0.01	0.09		
			-		

CHEMICAL	[CAS]	Eight-bo average airborne		•	Ceiling limit airborne concentration
		ppm	mg/	m ³	ppm mg/m³
Mica .	[12001-26-2]	_	3	matter co asbestos a	e is for particulate ntaining no and <1% crystalline spirable fraction.
Mineral wool fibre, see Synthetic	c Vitreous Fibre	s - Glass,	Rock,	or Slag we	ol fibres
Molybdenum, as Mo	[7439-98-7]			-	
Soluble compounds			5		
Metal and insoluble compounds		—	10		
Monochlorobenzene, see Chlorob	enzene				
Monocrotophos- (skin)	[6923-22-4]	—	0.25		
Morpholinc- (skin)	[110-91-8]	20	71		
Naled- (skin)	[300-76-5]	_	3		
Naphthalene	[91-20-3]	10	52		
 β-Naphthylamine 	[91-59-8]	—			
Nickel	[7440-02-0]				
Elemental/Metal		_	1.5	Inhalable	fraction.
Insoluble compounds, as Ni		—	0.2	Inhalable	fraction.
Soluble compounds, as Ni		_	0.1	Inhalable	fraction.
Nickel carbonyl, as Ni	[13463-39-3]	0.05	0.12		
Nickel subsulfide, as Ni	[12035-72-2]	—	0.1	Inhalable	fraction.
Nickel sulfide roasting, fome &		subsulfid	e		
Nicotine- (skin)	[54-11-5]	_	0.5		
Nitrapyrin	[1929-82-4]	—	10		
Nitric acid	[7697-37-2]	2	5.2		:
Nitric oxide	[10102-43-9]	25	31		
p-Nitroaniline- (skin)	[100-01-6]	_	3		
Nitrobenzene- (skin)	[98-95-3]	1	5		
p-Nitrochlorobenzene-	[100-00-5]	0.1	0.64		
(skin)					
4-Nitrodiphenyl- (skin)	[92-93-3]	_	_		
Nitroethane	[79-24-3]	100	307		
Nitrogen dioxide	[10102-44-0]	3	5.6		
Nitrogen trifluoride	[7783-54-2]	10	29		
Nitroglycerin (NG)- (skin)	[55-63-0]	0.05	0.46		
Nitromethane	[75-52-5]	20	50		
1-Nitropropane	[108-03-2]	25	91 84		
2-Nitropropane	[79-46-9]	10	36		
N-Nitrosodimethylamine	[62-75-9]	-			
(skin) Nitrataluana (akia)	FRR 70.0.				
Nitrotoluene- (skin)	[88-72-2; 00.08.1, 00.00	2	11		
Nitratrichlosomethons and Chlore	99-08-1; 99-99	-0j			
Nitrotrichloromethane, see Chloro Nitrous oxide	picrin [10024-97-2]	50	90		
Nonane all isomers	[10024-97-2] [1]] .84- 2]	50 200	90 1050		
Nuisance particulates, see Particu				NOC	
Octachloronaphthalene-	[2234-13-1]	WINC CHARS	onea (1 0.1		
(skin)	[1223-12-1]		0.1		
Octane (all isomers)	[111-65-9]	300	1400		
Oil mist, mineral	[111-02-9]		5		
more contractor		_	5		

CHEMICAL	[CAS]	Eight-ho average airborne ppm			Ceiling airborn concen ppm	e
Osmium tetroxide, as Os	[20816-12-0]		0.001			-6-
Oxalic acid	[20010-12-0]	0.0002	1	0		
Oxygen difluoride	[7783-41-7]	_	1		0.05	0.11
Ozone	[10028-15-6]				0.0.0	0.11
Heavy work	[10028-15-0]	0.05	_			
Moderate work		0.08	_			
Light work		0.10	_			
Heavy moderate, or light w	orkloads	0.20	_			
(≤ 2 hours)						
Paraffin wax fume	[8002-74-2]	_	2			
Paraquat	[4685-14-7]					
Total particulate			0.5			
respirable fraction		_	0.1			
Parathion- (skin)	[56-38-2]		0.1			
Particulate polycyclic aromatic		PAH), see	Coal tz	ar pitch vo	latiles P	articulates
Not Otherwise Classified (PNO						
Inhalable particulate			10	matter co	ntaining and <19	crystalline
Respirable particulate		-	3	The value matter co asbestos	e is for intaining and <19	particulate
Pentaborane	[19624-22-7]	0.005	0.013		opinion	citeret in
Pentachloronaphthalene-	[1321-64-8]	_	0.5			
(skin)						
Pentachloronitrobenzene	[82-68-8]	_	0.5			
Pentachlorophenol- (skin)	[87-86-5]	_	0.5			
Pentacrythritol	[115-77-5]	_	10			
Pentane (all isomers)		600	1770			
2-Pentanone, see Methyl proply	ketone					-
Perchloroethyine	[127-18-4]	25	170			
(Tetrachloroethylene)			-			
Perchloromethyl mercaptan	[594-42-3]	0.1	0.76			
Perchloryl fluoride	[7616-94-6]	3	13			
Perfluoroisobutylene	[382-21-8]				0.01	0.082
Percipitated silica, see Silica-A						
Perlite	[93763-70-3]		10	matter co	ntaining	particulate no crystalline
Persulfates						
Ammonium	[7727-54-0]		0.1			
Potassium	[7727-21-1]	—	0.1			
Sodium	[7775-27-1]	-	0. 1			
Petroleum distillates, see Gasoli «Chloroacetophenone	ine, Stoddard sol	vent; VM	&P nag	htha Phen	acyl chi	oride, see

CHEMICAL

[CAS]

		airborn	e concentration	concer	tration
		ppm	mg/m³	ррт	mg/m³
Phenol- (skin)	[108-95-2]	5	19		
Phenothiazine- (skin)	[92-84-2]	—	5	-	
N-Phenyl-beta-naphthylamine	[135-88-6]		_		
o-Phenylenediamine	[95-54-5]	_	0.1		
m-Phenylenediamine	[108-45-2]	_	0.1		
p-Phenylenediamine	[106-50-3]	_	0.1		
Phenyl ether, vapour	[101-84-8]	1	7		
Phenylethylene, see Styrene, mo	onomer				
Phenyl glycidyl ether(PGE) - (skin)	[122-60-1]	0.1	0.6		
Phenylbydrazine	[100-63-0]	0.1	_		
Phenyl mercaptan	[108-98-5]	0.5	2.3		
Phenylphosphine	[638-21-1]			0.05	0.23
Phorate- (skin)	[298-02-2]	_	0.05		
Phosonin, see Mevinphos	<u></u>				
Phosgene	[75-44-5]	0.1	0.40		
Phosphine	[7803-51-2]	0.3	0.42		
Phosphoric acid	[7664-38-2]		1		
Phosphorus (yellow)	[7723-14-0]	0.02	0.1		
Phosphorus oxychloride	[10025-87-3]	0.02	0.63		
Phosphorus pentachloride	[10026-13-8]	0.1	0.85		
Phosphorus pentasulfide	[1314-80-3]	V.1	1		
Phosphorus trichloride	[7719-12-2]	0.2	1.1		
Phthalic anhydride	[7719-12-2] [85-44-9]				
m-Phthalodinitrile		1	6.1 5		
Picloram	[626-17-5]	_			
.	[1918-02-1]	—	10		
	[88-89-1]	_	0.1		
Pindone	[83-26-1]	_	0.1		
Piperazine dihydrochloride	[142-64-3]	—	5		
2-Pivalyl-1, 3-indandione, see P					
Plaster of Paris, see Calcium su					
Platinum	[7440-06-4]		_		
Metal		_	1		
Soluble salts, as Pt			0.002		
Polychlorobiphenyls, see Chloro					
Polytetrafluoroethylene decompo	osition	-	_		
Products					
Portland cement	[65997-15-1]	_	10 The value is containing no a crystalline silic	sbestos a	
Potassium hydroxide	[1310-58-3]		-	_	2
Propane	[74-98-6]	2500	_		
Propane sultone	[1120-71-4]	_	_		
Propargyl alcohol- (skin)	[107-19-7]	1	2.3		
β-Propiolactone	[57-57-8]	0.5	1.5		
Propionic acid	[79-09-4]	10	30		
Propoxur	[114-26-1]	_	0.5		
n-Propyl acetate	[109-60-4]	200	835		

CHEMICAL

n-Propyl alcohol- (skin)

Propylene dichloride

[71-23-8]

[78-87-5]

average	ur time-weighted concentration	Ceiling airborn concen	e
ppm	mg/m³	ppm	mg/m³
200	492		
75	347		
0.05	0.34		

	Propylene dientoriae	[/0-0/-2]	13	347	
	Propylene glycol dinitrate	[6423-43-4]	0.05	0.34	
	- (skin)				
	Propylene, glycol mono-				
	methyl ether	[107-98-2]	100	369	
	Propylene imine- (skin)	[75-55-8]	2	4,7	
	Propylene oxide	[75-56-9]	20	48	
	n-Propyl nitrate	[627-13-4]	25	107	
	Propyne, see Methyl acetylene		-		
	Pyrethrum	[8003-34-7]	_	5	
	Pyridine	[110-86-1]	5	16	
	Pyrocatechol, see Catechol				
	Quartz, see Silica-Crystalline				-
	Quinone	[106-51-4]	0.1	0.44	
	Resorcinol	[108-46-3]	10	45	
	Rhodium	[7440-16-6]			
	Metal		_	1	
	Insoluble compounds, as Rh		—	1	
	Soluble compounds, as Rh			0.01	
	Ronnel	[299-84-3]	_	10	
	Rosin core solder thermal	[8050-09-7]		_	Sensitizer; reduce exposure to
	decomposition products,				as low as possible
	as resin acids-colophony				
_	Rotenone (commercial)	[83-7 9- 4]	—	5	
•	Rubber Fume	•	-	0,75	
	(Limits relate to cyclohexane	soluble material))		
	Rubber Process Dust		—	8	
	Rubber solvent (Naphtha)	[8030-30-6]	400	1590	1
	Selenium and compounds,	[7782-49-2]	<u> </u>	0.2	
	as Se				
	Selenium hexafluoride,	[7783-79-1]	0.05	0.16	
	as Se				
	Sesone	[136-78-7]	—	10	
	Silane, see Silicon tetrahydride				
	Silica Amorphous			N	
	Diatomaccous earth	[61790-53-2]			
	(uncalcined)				
	Inhalable particulate		_	10	The value is for particulate matter
					containing no asbestos and <1%
					crystalline silica. Inhalable fraction.
	Dessimble metionists		_	3	The value is for particulate matter
	Respirable particulate		-	5	containing no asbestos and <1%
					crystalline silica. Respirable
					fraction.
	Percipitated silica	[112926-00-8]	-	10	
	Silica, fume	[69012-64-2]	—	2	Respirable fraction.

CHEMICAL	[CAS]	average	ur time-weighted	Ceiling limit airborne concentration
		ррт	mg/m³	ppm mg/m³
Silica, fused	[60676-86-0]	_	0.1 Respirabl	e fraction.
Silica gel	[112926-00-8]		10	
Silica - Crystalline				
Cristobalite	[14464-46-1]	—	0.05 Respira	ble fraction.
Quartz	[14808-60-7]	—	-	ble fraction.
Tridymite Trianli	[15468-32-3] [1317-95-9]	—		ble fraction.
Tripoli	1317-33-3			ined respirable quartz. ble fraction.
Silicon	[7440-21-3]	_	10	
Silicon carbide	[409-21-2]	_	ontaining	is for particulate matter no asbestos and talline silica.
Silicon tetrahydride	[7803-62-5]	5	6.6	
Silver	[7440-22-4]			
Metal		_	0.1	
Soluble compounds, as Ag	1. C.	_	0.01	
Soapstone				
Inhalable dust		-		s for particulate matter no asbestos and lline silica,
Respirable dust		_	matter cont	s for particulate aining no asbestos rystalline silica. fraction
Sodium azide	[26628-22-8]		Карпалс	
as Sodium azide	[20020-22-0]			- 0.29
as Hydrazoic acid vapour				0.11
Sodium bisulfite	[7631-90-5]	_	5	511.1
Sodium 2,4-dichloro-phenoxyeth	• •	esone	-	
Sodium fluoroacetate- (skin)	[62-74-8]	-	0.05	
Sodium hydroxide	[1310-73-2]			— 2
Sodium metabisulfite	[7681-57-4]	_	5	-
Starch	[9005-25-8]	_	10	
Stearates	[_	10 .	
Stibine	[7803-52-3]	0.1	0.51	
Stoddard solvent	[8052-41-3]	100	525	
Strontium chromate, as Cr	[7789-06-2]	_	0.0005	
Strychnine	[57-24-9]		0.15	
Styrene, monomer- (skin)	[100-42-5]	20	85.2	
Subtilisins (Proteolytic	[1395-21-7; 90	14-01-11		
enzymes as 100% pure cryst				- 0.00006
Sucrose	[57-50-1]		10	
Sulfometuron methyl	[74222-97-2]		5.	
Sulfotep- (skin)	[3689-24-5]	_	0.2	
Sulfur dioxide	[7446-09-5]	2	5.2	
Sulfur hexafluoride	[2551-62-4]	1000	5970	
Sulfuric acid	[7664-93-9]	. 🐨	1	

CHEMICAL	[CAS]	Eight-hor average airborne		weighted	Ceiling airborne concentr	
		PPm	mgh	m ³	ppm	mg/m ³
Sulfur monochloride	[10025-67-9]				1	5.5
Sulfur pentafluoride	[5714-22-7]				0.01	0.10
Sulfur tetrafluoride	[7783-60-0]				0.1	0.44
Sulfuryl fluoride	[2699-79-8]	5	21			
Sulprofos	[35400-43-2]	_	1			
Synthetic Vitreous Fibres					•	
Continuous filament glass fit	жев	-		with an a or greate determine filter me magnifica	aspect rati r than 3:1 ed by the thod at 40 ution (4-mi ntrast illu	membrane 0-500X n objective)
Glass wool fibres		_	lf/ml			
Rock wool fibres		—	lf/ml			
Slag wool fibres		—	1 f/m l			
Special purpose glass fibres		_	1 f/m l		*	
Continuous filament glass fil	ne	—	5	Inhalable	fraction.	
Systox, see Demeton						
2, 4, 5-T	[93-76-5]	—	10			
Tale (containing no asbestos fibres)	[14807-96-6]	-	2	fraction		e respirable late matter listed.
Talc (containing asbestos fibres)	, see Asbestos					
Tantalum, metal and oxide	[7440-25-7]					
dust, as Ta	[1314-61-0]	_	5			
TEDP, see Sulfotep						
Tellurium and compounds,	[13494-80-9]	_	0.1			
except hydrogen telluride, as	Те					
Tellurium hexafluoride	[7783-80-4]	0.02	0.10			
Temephos	[3383-96-8]	-	10			
Terephthalic acid	[100-21-0]	_	10			
TEPP- (skin)	[107-49-3]	0.004	0.05			
Terphenyls	[26140-60-3]				8.5	5
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			
(skin)						
Tetrachloroethylene, see Perchlo	roethylene					
Tetrachloromethane, see Carbon	tetrachloride					
Tetrachloronaphthalene	[1335-88-2]	-	2			
Tetraethyl lead, as Pb-	[78-00-2]	—	0.1	-		
(skin)						
Tetrahydrofuran	[109-99-9]	200	590			
Tetramethyl lead, as Pb-	[75-74-1]	_	0.15			
(skin)						

CHEMICAL	[CAS]	Eight-ho	our time-weighted	Ceiling	, limit
		average airborne	concentration	airborn concen	
		ppm	mg/m³	ppm	mg/m 3
Tetramethyl succinonitrile — (skin)	[3333-52-6]	0.5	2.8	1	
Tetranitromethane	[509-14-8]	0.005	0.04		
Tetrasodium pyrophosphate Anhydride	[7722-88-5]	_	5		
Decahydrate		_	5		
Tetryl	[479-45-8]	_	1.5		
Thalium, elemental and	[7440-28-0]	_	0.1		
soluble compounds, as TI- (s					
4, 4'-Thiobis (6-tert-buty) -m-cresol)	[96-69-5]	-	10		
Thioglycolic acid- (skin)	[68-11-1]	1	3.8		
Thionyl chloride	[7719-09-7]	-	210	1	4.9
Thiram	[137-26-8]	_	1	•	1.5
Tin	[7440-31-5]		-		
Metal		_	2		
Oxide & inorganic compoun	ds.		2		
except Tin hydride, as Sn			_		
Organic compounds, as Sn-	(skin)	_	0.1		
Titanium dioxide	[13463-67-7]		10		
o-Tolidine- (skin)	[119-93-7]	_	_		
Toluene- (skin)	[108-88-3]	50	188		
Toluene-2,4-diisocyanate	[584-84-9]	0.005	0.036		
(TDI)					
o-Toluidine- (skin)	[95-53-4]	2	8.8		
m-Toluidine- (skin)	[108-44-1]	2	8.8		
p-Toluidine- (skin) 🛛 🔭	[106-49-0]	2	8.8		
Toluol, see Toluene					
Toxaphene, see Chlorinated cam	phene				
Tributyl phosphate	[126-73-8]	0.2	2.2		
Trichloroacetic acid	[76-03-9]	1	6.7		
1, 2, 4-Trichloro benzene	[120-82-1]			5	37
1, 1, 1-Trichloroethane, see Met	-				
 1, 1, 2-Trichloroethane- (skin) 	[79-00-5]	10	55		
Trichkoroethylene	[79-01-6]	50	269		
Trichlorofluromethane	[75-69-4]			1000	5620
Trichloromethane, see Chlorofor	m				
Trichloronapthalene- (skin)	[1321-65-9]	—	5		
Trichloronitromethane, see Chlor	ropierin				
1, 2, 3-Trichloropropane- (skin)	[96-18-4]	10	60		
1, 1, 2-Trichloro-1, 2, 2- trifluoroethane	[76-13-1]	1000	7670		
Tricyclohexyltin hydroxide, see (Cyhexatin	-			
Tridymite, see Silica-Crystalline					
Triethanolamine	[102-71-6]	_	5		
Triethylamine- (skin)	[121-44-8]	1	4 .1		
		-			

HEMICAL	[CAS]	Eight-hour time-weighted average airborne concentration		Ceiling limit airborne concentration	
•		ppm	mg/m ³	ppm	mg/m ³
rifluobromomethane	[75-63-8]	1000	6090		
, 3, 5-Triglycidyl-	[2451-62-9]	_	0.05		
s-triazinetrione					
rimellitic anhydride	[552-30-7]			_	0.04
rimethylamine	[75-50-3]	5	12		
rimethyl benzene (mixed Isomers)	[25551-13-7]	25	123		
rimethyl phosphite	[121-45-9]	2	10		
, 4, 6-Trinitrophenol, see Picri		-	10		
, 4, 6-Trinitrophenylmethylnitr		4			
, 4, 6-Trinitrotoluene(TNT)	[118-96-7]	_	0.1		
— (skin)					
riorthocresyl phosphate- (skin)	[78-30-8]	—	0.1		•
riphenyl amine	[603-34-9]	_	5		
riphenyl phosphate	[115-86-6]	_	3		
ripoli, see Silica-Crystalline	•				
lungsten, as W	[7440-33-7]				
Metal and insoluble compou		_	5		
Soluble compounds		_	1		
Turpentine	[8006-64-2]	100	556		
-Valeraldehyde	[110-62-3]	50	176		-
anadium pentoxide as V ₂ O ₃ ;	[1314-62-1]	_	0.05		
respirable dust or fome	fees on vi				
egetable oil mist		_	10		
/inyl acetate	[108-05-4]	10	35		
/inyl benzene, see Styrene	[**** vv-1]				
/inyl bromide	[593-60-2]	0.5	22 ·		
/inyl chloride	[75-01-4]	1	2.6		
/inyl cyanide, see Acrylonitrile		-			
-Vinyl cyckohexene	[100-40-3]	0.1	0.4		
/inyl cyclohexene dioxide-	[106-87-6]	0.1	0.57		
(skin)	[]				
/inyl fluoride	[75-02-5]]	1	_		
/inylidene chloride	[75-35-4]	5	20		
/inylidene flouride	[75-38-7]	500			
Vinyl toluene	[25013-15-4]	50	242		
M & P Naphtha	[8032-32-4]	300	1370		
Warfarin	[81-81-2]		0.1		
Welding fumes (NOC)			5		
Wood dust					
(hard woods)		—	1		
Soft wood		_	5		
(ylene (o-, m-, p-isosmers)	1130-20-7;	100	434		
	95-47-6;				

CHEMICAL	[CAS]	Eight-hour time-weighted average airborne concentration		Ceiling limit airborne concentration	
		ррт	mg/m ³	ppm	mg/m³
m-Xylene α,α'-diamine- (skin)	[1477-50-0]		1	_	0.1
Xylidine (mixed isomers)- (skin)	[1300-73-8]	0.5	2.5	•	
Yttrium metal & compounds, ES Y	[7440-65-5]		1 . ·		
Zinc chloride fume	[7646-85-7]	_	1		
Zinc chromates, as Cr	[13530-65-9;	_	0.01		
•	11103-86-9;				
	37300-23-5]				
Zinc oxide	[1314-13-2]				
Fume		_	5		
Dust			10		
Zirconium and compounds,	[7440-67-7]	_	5		
15 Zr					
Note:					
Service, Colombus, Ohio, USA as the unique identifier for a chemical substance. fibre - fibre of more than 5 micrometer in length and less than 3 micrometer in width and having a length to width ratio of not less than 3 to 1 when viewed in a phase contrast optical microscope at 400 to 500 magnifications. f/ml - fibres per millilitre of air. inhalable - a fraction of airborne particulates that are captured by a particle size-selective instrument having the following collection efficiency:					
•	le aerodynamic		inhalable	particul	ate
diame	diameter (micrometer)		mass (%)		
0 1			100 97		
2		94			
5		87			
10			7	7	
20			65		
- 30 40			5		
40 50		54.5 52.5			
	100		5		
 mg/m³ - milligrams per cubic meter of air at 25° Celsius and one atmosphere pressure. ppm - parts of vapour or gas per million parts of contaminated air by volume. respirable - a fraction of airborne particulates that are captured by a particle size-selective instrument having the following collection efficiency: 					
					-

particle aerodynamic	respirable particulate
diameter (micrometer)	mass (%)
0	100
1	97
2	91
3	74
4	50
5	30
6	17
7	9
8	5
10	1

skin

 refer to the potential contribution to the overall exposure by the cutaneous route including muccus membranes and eye, either by air-borne, or more particularly, by direct contact with the substance.

SCHEDULE II

[Subregulation 27(3)]

Chemicals for which medical surveillance is appropriate

- 1. 4-Aminodiphenyl
- 2. Arsenic and any of it compound
- 3. Asbestos (all forms except crocidolite)
- 4. Auramine, Magenta
- 5. Benzidine
- 6. Beryllium
- 7. Cadmium and any of it compound
- 8. Carbon disulphide
- 9. Disulphur dichloride
- 10. Benzene including benzol
- 11. Carbon tetrachloride
- 12. Trichloroethylene
- 13. n Hexane
- 14. bis (Chloromethyl) ether
- 15. Chromic acid

16. Chromium, metal and inorganic compounds, e. g. Water-soluble Cr VI compounds, Insoluble Cr VI compounds, Insoluble compounds

- 17. Free crystalline silica
- 18. Isocyanates
- 19. Lead (including organic lead compounds)
- 20. Manganese
- 21. Mercury
- 22. Mineral oil including paraffin
- 23. b-Naphthylamine
- 24. 1-Naphthylamine and its salts
- 25. Orthotolidine and its salts
- 26. Dianisidine and its salts
- 27. Dichlorobenzidine and its salts
- 28. 4-Nitrodiphenyl
- 29. Nitro or amino derivatives of phenol and of benzene or its homologues
- 30. Nitrous fumes. Chromate or dichromate of potassium, sodium, ammonium or zinc
- 31. Pesticides
- 32. Pitch
- 33. Tar, bitumen or creosote
- 34. Vinyl chloride monomer (VCM)

SCHEDULE III

[Paragraph 5(2) (b)]

Information On Pesticides

1. A statement of the common name of the pesticide, if available, its trade and chemical name, and structural formula, and of the name and concentration of every active ingredient of the pesticide.

2. The name and concentration of every other ingredient of the pesticide.

3. The toxicological information on every ingredient of the pesticide and on the pesticide as a whole.

4. The instructions for, and the precautionary measures to be taken in connexion with the use of the pesticide.

5. The name, address and telephone number of the supplier and manufacture of the pesticide.

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> DATUK DR FONG CHAN ONN Minister of Human Resources

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