Workplace exposure limits for airborne contaminants

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safe work australia

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1. Introduction

This document contains a list of workplace exposure limits (WEL) for airborne contaminants and information to assist persons conducting a business or undertaking (PCBUs) to meet their duties under the model Work Health and Safety (WHS) Act and model WHS Regulations in relation to airborne contaminants.

1.1 Development of workplace exposure limits

The WEL are the result of the review of the *Workplace exposure standards (WES) for airborne contaminants* (WES review). The WES review assessed evidence related to the human-health impacts of airborne contaminants (excluding asbestos) and recommended changes to the exposure standards to ensure they are based on the highest quality, contemporary evidence and supported by a rigorous scientific approach.

Key differences between the *Workplace exposure standards for airborne contaminants* and this document include:

- Workplace exposure standards (WES) are now called workplace exposure limits (WEL) – to align with international practice and better reflect the requirements of the model WHS laws as these are exposure levels that must not be exceeded[1] rather than best practice standards.
- WEL for some chemicals have been modified to reflect the health-based recommendations from the WES review – however, most limits remain unchanged.
- WEL for new airborne contaminants have been added.
- removal of airborne contaminants that are prohibited for import, manufacture and use under other Australian laws.
- removal of the WEL for non-threshold genotoxic carcinogens (NTGCs) listed in Appendix B.
- changes to notations:
    - the sensitiser notation used in the WES has been replaced by more specific notations - respiratory sensitiser (RSEN) and dermal sensitiser (DSEN).
    - addition of a new notation for ototoxic substances, where exposure in combination with noise can increase the risk of hearing loss.
    - carcinogenicity notations removed as there is more contemporary information available from the Hazardous chemicals information system or safety data sheets.
- new notes to highlight airborne contaminants that are also subject to additional regulations around use, handling, storage and/or health monitoring.

[1] Limited, controlled excursions above the WEL may be permitted, provided they meet the requirements specified in section 3.1 below.

WHS ministers agreed to a transitional period for implementation of the WEL. At the end of the transitional period, this document will replace the *Workplace exposure standards for airborne contaminants*. Until 30 November 2026, PCBUs must continue to ensure that no person at the workplace is exposed to a substance or mixture in an airborne concentration that is higher than the WES in the *Workplace exposure standards for airborne contaminants*.

1.2 Legislative context

PCBUs have a primary duty under the model WHS Act to ensure, so far as is reasonably practicable, the health and safety of workers and others at the workplace (section 19). This requires PCBUs to eliminate risks to health and safety, so far as is reasonably practicable; and if this is not reasonably practicable, to minimise those risks so far as is reasonably practicable (section 17).

In discharging their primary duty under section 19, a PCBU is required to manage the risks to health and safety associated with the use, handling etc. of hazardous chemicals[2] at the workplace in accordance with Part 3.1 of the model WHS Regulations.[3]

The model WHS Regulations also require a PCBU to ensure that no person at the workplace is exposed to a substance or mixture in an airborne concentration that exceeds the WES for the substance or mixture (regulation 49). Further, a PCBU is required to conduct air monitoring if they are not certain on reasonable grounds whether the airborne concentration of a substance at the workplace exceeds the WES or where the monitoring is needed to determine if there is a risk to health (regulation 50).

From the end of the WEL transitional period, the model WHS Regulations will require PCBUs to:

- ensure that no person at the workplace is exposed to a substance or mixture in an airborne concentration that exceeds the WEL for that substance.
- undertake air monitoring if they are not certain on reasonable grounds whether the airborne concentration of substance exceeds the WEL.

[2] Most airborne contaminants on the WEL are hazardous chemicals.
[3] Regulation 351 requires the PCBU to take particular matters into account in managing the risks of hazardous chemicals and regulation 352 sets out additional situations in which the PCBU must review its control measures for managing the risks of hazardous chemicals in the workplace.

2. Managing the risk of airborne contaminants

An airborne contaminant is a fume, mist, gas, vapour, or dust that can be harmful to health when breathed in. They may not be visible to the naked eye nor detected by odour. They may arise from chemicals or materials used in the workplace or be generated by work processes.

The risks from airborne contaminants in the workplace must be managed.

2.1 Airborne contaminants and exposure limits

Airborne contaminants with a WEL have known adverse health effects. The WEL for each airborne contaminant in Attachment A is intended to protect the health of workers in Australia from both the short and long term effects of exposure.

Exposure limits are the maximum level of an airborne contaminant that most (but not all) people can be exposed to without harm to their health.

The WEL were derived, as described in the WES review methodology, by evaluating information from trusted international sources to identify appropriate and contemporary health-based limits for each airborne contaminant.

However, WEL do not identify the dividing line between an exposure that will or won't result in adverse health effects. PCBUs must eliminate health and safety risks so far as is reasonably practicable, and if this is not reasonably practicable, minimise those risks so far as is reasonably practicable.

Some people may have health effects at levels below the exposure limit, either due to individual differences or due to existing health conditions (such as pregnancy, cancer treatment, recovery from an illness, heart, or lung disease).

There may be additional factors that can cause people to have health effects at an exposure level below the WEL. If there are multiple airborne contaminants in the workplace, then the combined effects of these must be considered. For example, exposure to multiple airborne contaminants either at the same time or one after the other may cause additional harm. Some airborne contaminants can also interact to be more harmful than either contaminant on its own. Exposure to ototoxic chemicals and noise can lead to increased risks of hearing loss.

Airborne contaminants that can also be absorbed through the skin can increase a worker's exposure and, in some cases, cause sensitisation. Sensitisation can also occur through respiratory tract absorption. More information on managing the hazards associated with these types of chemicals can be found in section 3.3: Advisory Notations.

PCBUs should also engage an appropriately trained and experienced person, such as an occupational hygienist, to understand the potential effect on worker's health of airborne contaminants in their workplace and identify the control measures that may be needed to protect workers.

2.2 Health monitoring

Health monitoring is the monitoring of a worker by a registered medical practitioner to identify changes in health status because of exposure to certain chemicals. PCBUs must provide health monitoring as part of managing the risks to the health and safety of workers in certain circumstances.

Health monitoring is required where a worker is carrying out ongoing work at a workplace using, handling, generating or storing hazardous chemicals and:

- there is a significant risk to a worker's health because of exposure to a hazardous chemical referred to in Schedule 14 to the model WHS Regulations (regulation 368(a)), or
- there is a significant risk that a worker will be exposed to a hazardous chemical not referred to in Schedule 14 and there are valid techniques available to detect its effect on the worker's health (regulation 368(b)(i)).

There are also health monitoring requirements for workers about to start, and one month after starting, lead risk work (regulation 405) and workers carrying out asbestos removal or other asbestos-related work that are at risk of exposure (regulation 435).

Through informing the current health status of workers, health monitoring provides the PCBU with an indication of the effectiveness of current control measures. Where adverse health effects are identified through health monitoring, a review of control measures will be required to revise the approach to managing the risks to workplace health and safety (regulation 352).

Exposure to some of the chemicals in the WEL list (Attachment A) and the NTGC list (Attachment B) are listed in Schedule 14. These chemicals have been identified in the appendices.

2.3 Prohibited and restricted chemicals

Some of the airborne contaminants in the WEL list (Attachment A) and the NTGC list (Attachment B) have restrictions on their supply, use, handling and storage as they are classified as prohibited or restricted carcinogens or restricted hazardous chemicals. These contaminants have been identified in the appendices.

The complete list of prohibited and restricted carcinogens and restricted hazardous chemicals can be found in Schedule 10 to the model WHS Regulations.

2.4 Non-threshold genotoxic carcinogens

During the development of the WEL, some airborne contaminants were identified as non-threshold genotoxic carcinogens (NTGCs). Exposure to these chemicals can cause genetic damage and may lead to cancer. Unlike other airborne contaminants, a practical, protective exposure level cannot be assigned for NTGCs due to limited data and the nature of their effects. Therefore, WEL have not been specified for chemicals identified as NTGCs (see Appendix B). Until 30 November 2026, PCBUs must continue to ensure that the WES, including those specified for any of the NTGCs, is not exceeded.

From 1 December 2026, there will no longer be exposure limits for NTGCs. If NTGCs are present, PCBUs must either eliminate them from the workplace, replace them with a safer alternative if possible, or reduce the risk as much as reasonably practicable. Where NTGCs are included in Schedules 10 and/or 14 to the model WHS Regulations, they are also subject to additional regulatory requirements.

3. Workplace exposure limits

The following information is provided to assist with the interpretation of the list of airborne contaminants and their corresponding WEL at Appendix A. Further guidance is available in the:

- *Guide for PCBUs: Air monitoring and the workplace exposure limits for airborne contaminants*
- *Technical guide: Air monitoring and the workplace exposure limits for airborne contaminants*

3.1 Types of exposure limits

There are three different kinds of exposure limits used in Appendix A:

- 8-hour time weighted average (TWA),
- short term exposure limit (STEL), and
- peak limitation.

Some airborne contaminants have more than one kind of exposure limit, e.g., a TWA and a peak limitation. For these contaminants, all relevant exposure limits apply at the same time.

8-hour time weighted average (TWA)

The TWA is the maximum average concentration of an airborne contaminant calculated for an eight-hour working day, based on a 5-day working week (40 hours). A worker must not be exposed to a level above the TWA over the course of an 8-hour working day.

The TWA limit is intended to protect most workers from long-term health effects of exposure to airborne contaminants.

The basic formula for calculating a worker's 8-hour time-weighted exposure is:

$$8\ hour\ time\ weighted\ exposure\ = \frac{exposure\ level \times length\ of\ exposure}{8\ hours}$$

where the exposure level and length of exposure are determined from the exposure occurring in a 40-hour week.

During daily work, a worker may be exposed to levels higher than the TWA for short periods, provided their overall exposure over the 8-hour working day remains lower than the TWA. However, worker exposure must never be higher than any short-term exposure limit (STEL) or peak limitation for that airborne contaminant – even if the worker's exposure would be less than the TWA exposure limit.

Where workers have a working day longer than 8 hours, work more than 40 hours a week or have less than 16 hours between shifts, the PCBU may need to adjust the TWA to a lower exposure level. A lower exposure level would protect workers who are working longer hours and have less recovery time between shifts.

A TWA cannot be adjusted to a higher exposure limit for shorter shifts.

PCBUs should seek assistance from a qualified professional to calculate shift adjustments.

Short term exposure limit (STEL)

A STEL is the time weighted average maximum concentration of an airborne contaminant calculated over a 15minute period. It is intended to protect most workers from the acute effects of exposure.

Worker exposure must not be higher than the STEL at any time, even if the overall exposure during the workday is less than the TWA exposure limit. Exposures at the STEL must not be longer than 15 minutes and cannot happen more than 4 times per day. There must be at least 60 minutes between each exposure at the STEL.

A STEL cannot be adjusted for longer or shorter working days.

Peak limitation

A peak limitation is the maximum or peak concentration of an airborne contaminant measured over the shortest time possible, and not exceeding 15 minutes. Exposure above the peak limitation can cause immediate and severe health effects, even if the exposure is very short. Exposure above the peak limitation is not allowed at any time.

A peak limitation cannot be adjusted for longer or shorter working days.

3.2 Measuring airborne contaminants

Units of measurement

Exposure limits for fumes and dusts (particulate contaminants) are written in milligrams of contaminant per cubic metre of air (mg/m^3). For particulate contaminants, the WEL applies to the inhalable fraction of particles in the air, unless the WEL list states that it applies to the respirable fraction.

The inhalable fraction is made up of small particles that can easily enter the nose, mouth and lungs through breathing. The respirable fraction (or respirable dust) is the very fine particles that can be breathed deep into the lower lungs. The respirable fraction is part of the inhalable fraction.

Some exposure limits for fibres, like asbestos and synthetic mineral fibres, are measured as fibres per millilitre of air (f/mL) for the respirable fraction.

Exposure limits for gases and vapours are expressed as the number of parts of the vapour or gas contaminant per million parts of air (ppm). When a WEL is given in both ppm and mg/m^3, the ppm number should be considered exact and the mg/m^3 used as a guide.

3.3 Advisory notations

Both appendices include advisory notations as shown in the table below. Notations provide PCBUs with information about the additional risks some airborne contaminants pose.

Notation	Definition
Sk	Absorption through the skin may be a significant source of exposure. Extra control measures should be used to minimise the risk of skin contact. These control measures could include gloves, protective clothing, safety eyewear and closed systems to transfer liquids or gases.
DSEN **RSEN**	Substances that cause sensitisation through dermal (skin) absorption are given the notation 'DSEN'. Substances that cause sensitisation through respiratory tract absorption are given the notation 'RSEN'. Sensitisation can occur even when workers are exposed to low levels of a chemical over extended periods of time. Once sensitised, a worker may react to the chemical, even when airborne concentrations of the chemicals are below the exposure limit. In these circumstances, sensitised workers must not be exposed further to the substance.
OTO	Ototoxic. Exposure can increase the risk of hearing loss. Hearing loss is more likely to occur if a worker is exposed to both noise and ototoxic substances than if exposed to just noise or the ototoxic substance alone. Refer to the *Model Code of Practice: Managing noise and preventing hearing loss at work.*

Notations are advisory only and do not cover all hazards related to the chemical. The safety data sheets (SDS) and/or HCIS are the best source of information for the hazard classification of a given substance or mixture used in the workplace.

3.4 Notes

The WEL list at Appendix A includes a range of notes as follows.

Note	Further information
(a)	Containing no asbestos and < 1% crystalline silica.
(b)	Fibres longer than 5 µm, width less than 3 µm and with an aspect ratio of not less than 3:1, as measured by the membrane filter method, at 400-650X magnification phase contrast illumination.
(c)	Lint free dust as measured by the vertical elutriator for cotton dust sampler described in the Transactions of the National Conference on Cotton Dust and Health 1970, North Carolina University Press, Chapel Hill, pp. 33-43, 1971.
(d)	For the two substances marked with this note (benomyl and sodium azide), the exposure limits are established as gravimetric (mg/m^3) values and converted into volumetric values.
(e)	Workers exposed to this chemical may require specific health monitoring (see regulations 368-378, Schedule 14 to the model WHS Regulations).

Note	Further information
(f)	The use, handling and storage of this chemical is subject to restriction or prohibition (see regulations 340, 380 - 384 and Schedule 10 to the model WHS Regulations).
(g)	Man-Made Mineral Fibres (MMVF) with random orientation, alkaline oxide and alkali earth oxide ($Na_2O+K_2O+CaO+$ MgO+BaO) content less or equal to 18% by weight.
(h)	As described in *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 81, Man-Made Vitreous Fibres*, pp. 45-54, 2002, IARCPress, Lyon, France (http://monographs.iarc.fr/ENG/Monographs/vol81/index.php).
(i)	MMVF with random orientation, alkaline oxide and alkali earth oxide ($Na_2O+K_2O+CaO+MgO+BaO$) content greater than 18% by weight.
(j)	Low biopersistence fibres are synthetic mineral fibres (Man-Made Vitreous (Silicate) Fibres) that have been tested according to the test protocol Methods for the Determination of the Hazardous Properties for Human Health of Man Made Mineral Fibres April 1999 (EUR 18748 EN) and found to comply with at least one of the following tests: • a short term biopersistence test by inhalation shows that the fibres longer than 20 µm have a weighted half-life less than 10 days; or • a short term biopersistence test by intratracheal instillation shows that the fibres longer than 20 µm have a weighted half-life less than 40 days; or • an appropriate intra-peritoneal test shows no evidence of excess carcinogenicity for the fibres; or • a suitable long term inhalation test demonstrates there is an absence of relevant pathogenicity or neoplastic changes
(k)	Both the particulate mass and vapor phase concentration should be measured and summed to determine total airborne concentration.
(l)	The particulate WEL and the vapour WEL for Ethylene glycol should be applied separately, they are not intended to be additive. Air monitoring methods should reflect the possible presence of both particulate and vapour when levels exceed the saturated vapour concentration.

Appendix A – Workplace Exposure Limits

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Acetaldehyde		75-07-0	20	36	50	91				
Acetic acid	Ethanoic acid; Glacial acetic acid	64-19-7	10	25	15	37				
Acetic anhydride		108-24-7	0.5	2.1	1	4.2				
Acetone	2-Propanone	67-64-1	250	594	500	1187				
Acetonitrile	Methylcyanide	75-05-8	20	34					Sk	
Acetylsalicylic acid	Aspirin	50-78-2	0.68	5					OTO	
Acrolein	2-Propenal; Acrylaldehyde	107-02-8	0.02	0.05	0.05	0.12			Sk	
Acrylic acid	2-Propenoic acid	79-10-7	10	29					Sk	
Allyl alcohol	2-Propen-1-ol	107-18-6	1	2.4	4	9.5			Sk	
Allyl propyl disulfide	Disulfide, 2-propenyl propyl	2179-59-1	2	12	3	18				
Aluminium, metal dust		7429-90-5		10						
Aluminium, welding fumes (as Al)		7429-90-5		1						
Aluminium oxide (including alpha-alumina)		1344-28-1		10						(a)
Aluminium, alkyls (NOC) (as Al)		7429-90-5		2						
Aluminium, pyro powders (as Al)		7429-90-5		5						
Aluminium, soluble salts (as Al)		7429-90-5		2						
2-Aminopyridine	2-Pyridylamine	504-29-0	0.5	2					Sk	
Amitrole	3-Amino-1,2,4-triazole	61-82-5		0.2						
Ammonia		7664-41-7	20	14	35	24				

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Ammonium chloride, fume		12125-02-9		10		20				
Ammonium perfluorooctanoate	Octanoic acid, pentadecafluoro-, ammonium salt	3825-26-1		0.01					Sk	
Ammonium sulphamate	Sulfamic acid, monoammonium salt	7773-06-0		10						
Amyl acetate (iso-, n-, sec- isomers)		123-92-2 628-63-7 626-38-0	50	270	100	541				
Aniline and homologues		62-53-3	0.5	1.94					DSEN Sk	
Antimony and compounds (excluding antimony trioxide)		7440-36-0		0.5						(e) (f)
Antimony trioxide, handling and use (as Sb)		1309-64-4		0.5						(e)
ANTU	1-Naphthylthiourea	86-88-4		0.3						
Arsenic and compounds (except arsine)				0.01					OTO	(f)
Arsine		7784-42-1	0.05	0.16						
Asbestos		1332-21-4								(b) (e)
►Amosite		12172-73-5	0.1 f/mL							(b) (e)
►Chrysotile		12001-29-5	0.1 f/mL							(b) (e)
►Crocidolite		12001-28-4	0.1 f/mL							(b) (e)
►Other forms of asbestos			0.1 f/mL							(b) (e)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
►Any mixture of these, or where the composition is unknown			0.1 f/mL							(b) (e)
Atrazine		1912-24-9		1					DSEN Sk	
Azinphos-methyl	Guthion	86-50-0		1					DSEN OTO Sk	
Barium and soluble compounds				0.5						
Barium sulfate (inhalable)		7727-43-7		4						(a)
Barium sulfate (respirable)		7727-43-7		1.35						(a)
Benomyl	Benlate	17804-35-2	0.08	1					DSEN	(d)
Benzene		71-43-2	1	3.2					Sk	(e) (f)
Benzoyl chloride	alpha-Chlorotoluene	98-88-4					0.5	2.8	DSEN	
Benzoyl peroxide	Dibenzoyl peroxide	94-36-0		5					DSEN	
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7	1	5.2					DSEN	
Beryllium and compounds		7440-41-7		0.00002		0.0002			DSEN RSEN Sk	(e) (f)
Biphenyl	Diphenyl; Phenylbenzene	92-52-4	0.2	1.3						
Bismuth telluride	Dibismuth tritelluride	1304-82-1		10						
Bismuth telluride, Se-doped		1304-82-1		5						
Bisphenol-A	BPA	80-05-7		2					DSEN	
Bitumen, fume	Asphalt (petroleum)	8052-42-4		0.5						(e)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Borates, tetra, sodium salts, incl anhydrous, decahydrate, pentahydrate		1330-43-4 12179-04-3 1303-96-4 10043-35-3		0.75						
Boron oxide	Diboron trioxide	1303-86-2		10						
Boron tribromide		10294-33-4					0.7	7.19		
Boron trifluoride		7637-07-2	0.1	0.28			0.7	1.95		
Bromacil		314-40-9	1	11						
Bromine		7726-95-6	0.1	0.66	0.3	2				
Bromine pentafluoride		7789-30-2	0.1	0.72						
Bromoform	Tribromomethane	75-25-2	0.5	5.2						
1-Bromopropane		106-94-5	0.1	0.5						
But-2-yne-1,4-diol		110-65-6		0.5					DSEN Sk	
Butane		106-97-8	800	1900						
2-Butoxyethanol	Butyl cellosolve; Butyl glycol; Ethylene glycol monobutyl ether	111-76-2	10	49	40	196			Sk	
2-Butoxyethyl acetate		112-07-2	20	133						
n-Butyl acetate sec-Butyl acetate tert-Butyl acetate iso-Butyl acetate		123-86-4 105-46-4 540-88-5 110-19-0	50	270	100	541				
n-Butyl acrylate	Acrylic acid, butyl ester; 2-Propenoic acid, butyl ester	141-32-2	1	5	5	26			DSEN Sk	
n-Butyl alcohol	1-Butanol	71-36-3	20	61					OTO	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
sec-Butyl alcohol	2-Butanol	78-92-2	100	303						
tert-Butyl alcohol	2-Propanol, 2-methyl-; tert-Butanol	75-65-0	20	62						
tert-Butyl chromate		1189-85-1						0.1	Sk	
n-Butyl glycidyl ether	Oxirane, (butoxymethyl)-; BGE	2426-08-6	3	16					DSEN Sk	
n-Butyl lactate	Propanoic acid, 2-hydroxy-, butyl ester	138-22-7	5	30						
Butyl mercaptan	1-Butanethiol	109-79-5	0.5	1.8						
Butylamine	1-Butanamine	109-73-9					5	15	Sk	
o-sec-Butylphenol	Phenol, 2-(1-methylpropyl)-	89-72-5	5	31					Sk	
p-tert-Butyltoluene	Benzene, 1-(1,1-dimethylethyl)-4-methyl-	98-51-1	10	61	20	121			OTO	
Cadmium and compounds (as Cd)				0.001					OTO	(e) (f)
Caesium hydroxide	Cesium hydroxide; Cs(OH)	21351-79-1		2						
Calcium carbonate	Carbonic acid, calcium salt (1:1); Limestone; Marble	471-34-1		10						(a)
Calcium cyanamide	Calcium carbimide	156-62-7		0.2					Sk	
Calcium hydroxide	Slaked lime	1305-62-0		1		4				
Calcium oxide	Lime	1305-78-8		1						
Calcium silicate	Silicic acid, calcium salt	1344-95-2		10						(a)
Calcium sulfate (respirable)	Sulfuric acid, calcium salt (1:1)	7778-18-9		1.5						(a)
Camphor, synthetic		76-22-2	2	12					DSEN	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
Caprolactam (dust and vapour) (incl. e caprolactam)	2H-Azepin-2-one, hexahydro-	105-60-2		5						
Captafol	Difolatan	2425-06-1		0.1					DSEN Sk	
Captan		133-06-2		0.5					DSEN	
Carbaryl	Sevin	63-25-2		0.5					Sk	
Carbofuran	Furadan	1563-66-2		0.1						
Carbon black		1333-86-4		3						(e)
Carbon dioxide		124-38-9	5000	9000	30000	54000				
Carbon disulfide	Carbon bisulfide	75-15-0	1	3.13					OTO Sk	(e) (f)
Carbon monoxide		630-08-0	20	23					OTO	
Carbon tetrabromide	Tetrabromomethane	558-13-4	0.1	1.4	0.3	4.1				
Carbon tetrachloride	Tetrachloromethane	56-23-5	0.1	0.63	5	32			Sk	
Carbonyl fluoride		353-50-4	2	5.4	5	13				
Cellulose (paper fibre)		9004-34-6		10						(a)
Chlorinated camphene		8001-35-2		0.5		1			Sk	
Chlorinated diphenyl oxide		31242-93-0		0.5						
Chlorine		7782-50-5					1	3		
Chlorine dioxide		10049-04-4	0.1	0.28	0.3	0.83				
Chlorine trifluoride		7790-91-2					0.1	0.38		
1-Chloro-1-nitropropane		600-25-9	2	10						
Chloroacetaldehyde		107-20-0					1	3.2		
Chloroacetone	2-Propanone, 1-chloro-	78-95-5					1	3.8	Sk	
alpha-Chloroacetophenone	Ethanone, 2-chloro-1-phenyl-	532-27-4	0.02	0.1	0.05	0.3				
Chloroacetyl chloride		79-04-9	0.05	0.23	0.15	0.69			Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Chlorobenzene		108-90-7	5	23						
o-Chlorobenzylidene malononitrile		2698-41-1		0.02					Sk	
Chlorobromomethane		74-97-5	200	1060						
Chlorodifluoromethane	Algofrene 22; Fluorocarbon 22; Freon 22	75-45-6	1000	3540						
Chloroform	Trichloromethane	67-66-3	0.5	2.5					Sk	
Chloropentafluoroethane	Fluorocarbon 115; Freon 115	76-15-3	1000	6320						
Chloropicrin		76-06-2	0.1	0.67						
2-Chloropropionic acid	Propanoic acid, 2-chloro-	598-78-7	0.1	0.44					Sk	
o-Chlorostyrene		2039-87-4	50	283	75	425				
Chlorosulphonic acid	Chlorosulfuric acid	7790-94-5	0.209	1						
Chlorpyrifos		2921-88-2	0.007	0.1					OTO Sk	(e)
o-Chlorotoluene	Benzene, 1-chloro-2-methyl-	95-49-8	50	259						
Chromium (metal), (II), (III) (as Cr)		7440-47-3		0.5						
Clopidol	Coyden	2971-90-6		2						
Coal dust (containing < 5% quartz) (respirable dust)				1.5						
Cobalt carbonyl (as Co)		10210-68-1		0.1						(e)
Cobalt hydrocarbonyl (as Co)		16842-03-8		0.1						(e)
Cobalt (metal & inorganic compounds)		7440-48-4		0.02					DSEN RSEN	(e) (f)
Copper, fume		7440-50-8		0.2						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
Copper, dusts & mists (as Cu)		7440-50-8		1						
Cotton dust, raw				0.1						(c)
Cresol, all isomers m-cresol o-cresol p-cresol		1319-77-3 108-39-4 95-48-7 106-44-5	5	22					Sk	
Crotonaldehyde	2-Butenal	4170-30-3	2	5.7					Sk	
Crufomate		299-86-5		5						
Cumene	Benzene, (1-methylethyl)-	98-82-8	25	125	75	375				
Cyanamide		420-04-2		0.2					DSEN Sk	
Cyanides (as CN)		57-12-5		1		5			OTO Sk	
Cyanoacrylates (Ethyl & Methyl)		7085-85-0 137-05-3	0.2	1	1	5.1			Sk	
Cyanogen	Oxalonitrile	460-19-5					5	10.6		
Cyanogen chloride		506-77-4					0.3	0.75		
Cyclohexane		110-82-7	100	350						
Cyclohexanol	Hexahydrophenol; Hexalin	108-93-0	50	206					Sk	
Cyclohexanone	Anone	108-94-1	10	40	20	80			Sk	
Cyclohexene	1,2,3,4-Tetrahydrobenzene	110-83-8	300	1010						
Cyclohexylamine	Cyclohexanamine	108-91-8	2	8.2					Sk	
Cyclonite	1,3,5-Triazine, hexahydro-1,3,5-trinitro-	121-82-4		0.1					Sk	
Cyclopentadiene		542-92-7	75	203						
Cyclopentane		287-92-3	600	1720						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Cyhexatin	Plictran; Tricyclohexyltin hydroxide	13121-70-5		5						
2,4-D	2,4-Dichlorophenoxy acetic acid	94-75-7		10					Sk	
Decaborane		17702-41-9	0.05	0.25	0.15	0.75			Sk	
Demeton		8065-48-3	0.01	0.1					Sk	
Diacetone alcohol	2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	20	96					Sk	
Diacetyl	2,3-Butanedione	431-03-8	0.01	0.04	0.02	0.07			Sk	
Diazinon		333-41-5		0.01					OTO Sk	
Diazomethane		334-88-3	0.2	0.34					Sk	
Diborane		19287-45-7	0.01	0.01						
Dibutyl phenyl phosphate	Phosphoric acid, dibutyl phenyl ester	2528-36-1	0.3	3.5					OTO Sk	
Dibutyl phosphate	Phosphoric acid, dibutyl ester	107-66-4	0.6	5					OTO	
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	0.05	0.58						
2-N-Dibutylaminoethanol	Ethanol, 2-(dibutylamino)-	102-81-8	0.5	3.5					Sk	
1,1-Dichloro-1-nitroethane	Ethane, 1,1-dichloro-1-nitro-	594-72-9	2	12						
1,3-Dichloro-5,5-dimethyl hydantoin		118-52-5		0.2		0.4				
Dichloroacetic acid		79-43-6	0.5	2.5					Sk	
Dichloroacetylene		7572-29-4					0.1	0.39		
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1	25	150	50	301				

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7	2	12	10	60				
Dichlorodifluoromethane		75-71-8	1000	4950						
1,1-Dichloroethane	Ethylidene chloride	75-34-3	100	412						
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4	5	29					Sk	
1,2-Dichloroethylene	Acetylene dichloride	540-59-0	200	793						
Dichlorofluoromethane	Fluorocarbon 21; Freon 21; Fluorodichloromethane	75-43-4	10	42						
Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6	1	4.5					DSEN Sk	
2,2-Dichloropropionic acid	Dalapon	75-99-0	1	5.8					Sk	
Dichlorotetrafluoroethane	Cryofluorane; Fluorocarbon 114; Freon 114; R-114; Tetrafluoro-dichloroethane	76-14-2	1000	6990						
Dichlorvos	DDVP	62-73-7	0.01	0.1					DSEN OTO Sk	
Dicrotophos	Bidrin	141-66-2		0.25					OTO Sk	
Dicyclopentadiene		77-73-6	0.5	2.7						
Dicyclopentadienyl iron	Ferrocene	102-54-5		0.1						
Diesel particulate matter (as respirable elemental carbon)				0.01						
Diethanolamine	Ethanol, 2,2'-iminobis-	111-42-2	0.11	0.5					Sk	
Diethyl ketone	3-Pentanone	96-22-0	200	705	300	1057				

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Diethyl pthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2		5						
Diethylamine	Ethanamine, N-ethyl-	109-89-7	2	6.2	10	30			Sk	
2-Diethylaminoethanol		100-37-8	10	48					Sk	
Diethylene glycol monobutyl ether	Ethanol, 2-(2-butoxyethoxy)-	112-34-5	10	67.5						
Diethylene triamine	1,2-Ethanediamine, N-(2-aminoethyl)-	111-40-0	1	4.2					DSEN Sk	
Difluorodibromomethane		75-61-6	100	858						
Diglycidyl ether	Oxirane, 2,2'-[oxybis (methylene)]bis-; DGE	2238-07-5	0.1	0.53						
Diisobutyl ketone	4-Heptanone, 2,6-dimethyl-	108-83-8	25	145						
Diisopropylamine	2-Propanamine, N-(1-methylethyl)-	108-18-9	5	21					Sk	
Dioxathion		78-34-2		0.2					Sk	
Dimethyl acetamide	Acetamide, N,N-dimethyl-	127-19-5	10	36					Sk	
Dimethyl ether	Methane, oxybis-	115-10-6	400	760	500	950				
Dimethyl sulfide	Methane, thiobis-	75-18-3	10	25						
Dimethylamine	Methanamine, N-methyl-	124-40-3	2	3.8						
Dimethylaminoethanol	Ethanol, 2-(dimethylamino)-	108-01-0	2	7.4	6	22			DSEN	
N,N-Dimethylaniline	Benzenamine, N,N-dimethyl-	121-69-7	5	25	10	50			Sk	
N,N-Dimethylethylamine	Ethanamine, N,N-dimethyl-	598-56-1	2	6						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Dimethylformamide	Formamide, N,N-dimethyl-	68-12-2	5	15					Sk	
1,1-Dimethylhydrazine		57-14-7	0.01	0.025					Sk	
Dimethylphthalate		131-11-3		5						
Dinitolmide	3,5-Dinitro-o-toluamide; Zoalene	148-01-6		1						
Dinitrobenzene (m-, o-, p-isomers)		99-65-0 528-29-0 100-25-4	0.15	1					Sk	
Dinitro-o-cresol		534-52-1		0.2					DSEN Sk	
1,4-Dioxane	1,4-Diethylene dioxide	123-91-1	5	18					Sk	
1,3-Dioxolane		646-06-0	20	61						
Diphenylamine	Benzenamine, N-phenyl-	122-39-4		5					Sk	
Dipropyl ketone	4-Heptanone	123-19-3	50	233						
Diquat (inhalable)	Diquat dibromide (ISO)	85-00-7		0.5					DSEN	
Diquat (respirable)	Diquat dibromide (ISO)	85-00-7		0.1					DSEN	
Di-sec-octyl phthalate	DOP	117-81-7		2						
Disulfiram	Tetraethylthiuram disulfide	97-77-8		2					DSEN	
Disulfoton		298-04-4		0.02					OTO Sk	
2,6-Di-tert-butyl-p-cresol	Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	128-37-0		10					Sk	
Diuron	Urea, N'-(3,4-dichlorophenyl)-N,N-dimethyl-	330-54-1		10						
Divinyl benzene	Benzene, diethenyl-	1321-74-0	10	53						
Emery, dust		1302-74-5		10						(a)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Endosulfan		115-29-7		0.1					Sk	
Enflurane	Ethane, 2-chloro-1-(difluoromethoxy)-1,1,2-trifluoro-	13838-16-9	20	150						
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8	0.5	1.9					DSEN Sk	
O-Ethyl O-(4-nitrophenyl) phenylphosphonothioate	EPN	2104-64-5		0.1					Sk	
Ethanolamine	Ethanol, 2-amino-	141-43-5	3	7.5	6	15			Sk	
Ethion	Nialate	563-12-2		0.05					OTO Sk	(e)
2-Ethoxyethanol	Ethylene glycol, ethyl ether	110-80-5	2	7.6					Sk	
2-Ethoxyethyl acetate	Cellosolve acetate; Ethylene glycol, ethyl ether acetate; Ethylglycolacetate	111-15-9	2	10.9					Sk	
2-Ethylhexanoic acid		149-57-5		5						
2-Ethylhexanol		104-76-7	1	5.33						
Ethyl acetate	Acetic acid, ethyl ester	141-78-6	200	720	400	1440				
Ethyl acrylate	2-Propenoic acid, ethyl ester	140-88-5	2	8.31	5	20			DSEN	
Ethyl alcohol	Ethanol	64-17-5	200	380	800	1500			OTO	
Ethyl benzene		100-41-4	20	87					OTO	(e)
Ethyl bromide	Ethane, bromo-	74-96-4	5	22					Sk	
Ethyl butyl ketone	3-Heptanone	106-35-4	50	234	75	350				
Ethyl chloride	Ethane, chloro-	75-00-3	100	264					Sk	
Ethyl ether	Ethane, 1,1'-oxybis-	60-29-7	400	1210	500	1520				
Ethyl formate	Formic acid, ethyl ester	109-94-4	100	303	150	462				
Ethyl mercaptan	Ethanethiol	75-08-1	0.5	1.3						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Ethyl silicate	Silicic acid (H4SiO4), tetraethyl ester	78-10-4	5	44						
Ethylamine	Ethanamine	75-04-7	5	9	15	28			Sk	
Ethylene chlorohydrin	Ethanol, 2-chloro-	107-07-3					1	3.3	Sk	
Ethylene glycol, particulate	1,2-Ethanediol	107-21-1				10			Sk	(l)
Ethylene glycol, vapour	1,2-Ethanediol	107-21-1	20	52	40	104			Sk	(l)
Ethylene glycol dinitrate	1,2-Ethanediol, dinitrate	628-96-6	0.01	0.063					Sk	
Ethylene thiourea	2-Imidazolidinethione	96-45-7		0.02					Sk	
Ethylenediamine	1,2-Ethanediamine	107-15-3	10	25					DSEN RSEN Sk	
Ethylidene norbornene	Bicyclo[2.2.1]hept-2-ene, 5-ethylidene-	16219-75-3	2	10	4	20				
N-Ethylmorpholine	Morpholine, 4-ethyl-	100-74-3	5	24					Sk	
Fenamiphos (including vapour)		22224-92-6		0.05					OTO Sk	(e) (k)
Fensulfothion (including vapour)		115-90-2		0.01					OTO Sk	(k)
Fenthion		55-38-9		0.2					Sk	(e)
Ferbam	Iron, tris(dimethylcarbamodithioato-S,S')-, (OC-6-11)-; Ferric dimethyl dithiocarbamate	14484-64-1		5						
Ferrovanadium, dust		12604-58-9		1		3				
Flour (cereal) dust				0.5						
Fluorides and compounds				2.5					Sk	
Fluorine		7782-41-4	1	1.6	2	3.1				(e)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Fonofos		944-22-9		0.1					Sk	
Formaldehyde	Formalin; Formic aldehyde; Methaldehyde; Methanal; Oxomethane; Oxymethylene	50-00-0	1	1.2	2	2.5			DSEN	
Formamide		75-12-7	10	18					Sk	
Formic acid		64-18-6	5	9.4	10	19				
Furfural	2-Furancarboxaldehyde	98-01-1	0.2	0.8					Sk	
Furfuryl alcohol	2-Furanmethanol	98-00-0	0.2	0.8					Sk	
Gallium arsenide (respirable)		1303-00-0		0.0003						
Germanium tetrahydride	Germane	7782-65-2	0.2	0.63						
Glutaraldehyde	Pentanedial	111-30-8					0.05	0.2	DSEN RSEN	
Glycerin mist	1,2,3-Propanetriol	56-81-5		10						(a)
Glycidol	Oxiranemethanol	556-52-5	25	76					Sk	
Glyoxal	Ethanedial	107-22-2	0.042	0.1					DSEN Sk	
Grain dust (oats, wheat, barley)				1.5						
Graphite, all forms except fibres (natural and synthetic) (respirable)		7782-42-5		3						(a)
Hafnium		7440-58-6		0.5						
Halothane	Ethane, 2-bromo-2-chloro-1,1,1-trifluoro-	151-67-7	0.5	4.1						
Heptane (n-heptane)		142-82-5	400	1640	500	2050			OTO	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	0.02	0.21					Sk	
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4	0.01	0.11						
Hexachloroethane		67-72-1	1	9.7						
Hexahydrophthalic anhydride	1,3-Isobenzofurandione, hexahydro-	85-42-7						0.005	DSEN RSEN	
Hexachloronaphthalene		1335-87-1		0.2					Sk	
Hexafluoroacetone		684-16-2	0.1	0.68					Sk	
Hexamethylene diisocyanate	Hexane, 1,6-diisocyanato-	822-06-0		0.02		0.07			DSEN RSEN Sk	(e)
Hexane (n-hexane)		110-54-3	50	176					OTO Sk	
Hexane (other isomers)			500	1760	1000	3500				
sec-Hexyl acetate	2-Pentanol, 4-methyl-, acetate	108-84-9	50	295						
Hexylene glycol	2,4-Pentanediol, 2-methyl-	107-41-5					25	121		
Hydrogen bromide	Hydrobromic acid	10035-10-6					3	9.9		
Hydrogen chloride	Hydrochloric acid; Muriatic acid	7647-01-0					2	2.98		
Hydrogen cyanide	Hydrocyanic acid	74-90-8					10	11	OTO Sk	
Hydrogen fluoride (as F)	Hydrofluoric acid	7664-39-3	0.5	0.4			2	1.6	Sk	
Hydrogen peroxide		7722-84-1	0.5	0.7						
Hydrogen selenide (as Se)		7783-07-5	0.05	0.16						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Hydrogen sulphide		7783-06-4	10	14	15	21				
Hydrogenated terphenyls		61788-32-7	0.5	4.9	2	19				
Hydroquinone	1,4-Benzenediol	123-31-9		2					DSEN Sk	
Hydroxypropyl acrylate (all isomers)		25584-83-2 999-61-1	0.5	2.8					DSEN Sk	
Indene	1H-Indene	95-13-6	10	48						
Indium and compounds (except indium phosphide)				0.1						
Indium phosphide		22398-80-7		0.1						
Iodine		7553-56-2	0.01	0.1			0.1	1		
Iodoform	Methane, triiodo-	75-47-8	0.6	10					Sk	
Iron oxide fume (Fe_2O_3) (as Fe)		1309-37-1		5						
Iron pentacarbonyl (as Fe)		13463-40-6	0.1	0.8			0.2	1.6	Sk	
Iron salts, soluble (as Fe)		7439-89-6		1						
Isoamyl alcohol	1-Butanol, 3-methyl-	123-51-3	20	73	80	292				
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1	50	152						
Isocyanates, (poly-) (as -NCO)	TDI; 2,6-TDI; HDI; IPDI; MDI; HMDI	584-84-9 91-08-7 822-06-0 4098-71-9 101-68-8 5124-30-1		0.02		0.07			DSEN RSEN Sk	(e)
Isooctyl alcohol	Isooctanol	26952-21-6	50	266					Sk	
Isophorone	2-Cyclohexen-1-one, 3,5,5-trimethyl-	78-59-1					5	28		

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Isophorone diisocyanate (see isocyanates)	Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-	4098-71-9		0.02		0.07			DSEN RSEN Sk	(e)
Isopropoxyethanol	Ethanol, 2-(1-methylethoxy)-	109-59-1	10	43					Sk	
Isopropyl alcohol	2-Propanol	67-63-0	200	491	400	984				
Isopropyl ether	Propane, 2,2'-oxybis-	108-20-3	250	1040	310	1300				
Isopropyl glycidyl ether	IGE	4016-14-2	50	238	75	356			Sk	
Isopropylamine	2-Propanamine	75-31-0	5	12	10	24			Sk	
N-Isopropylaniline	Benzenamine, N-(1-methylethyl)-	768-52-5	2	11					Sk	
Kaolin	Argilla; Porcelain clay	1332-58-7		10						(a)
Ketene	Ethenone	463-51-4	0.5	0.86	1.5	2.6				
Lead arsenate (as $Pb_3(AsO_4)_2$)		3687-31-8		0.15					OTO	(e) (f)
Lead, inorganic dusts and fumes (as Pb)		7439-92-1		0.05					OTO	(e) (f)
Lindane		58-89-9	0.008	0.1					Sk	
Lithium hydride		7580-67-8				0.02				
LPG (liquified petroleum gas)		68476-85-7	1000	1800						
Magnesite	Carbonic acid, magnesium salt (1:1)	546-93-0		10						(a)
Magnesium oxide, fume	Calcined magnesite	1309-48-4		10						
Malathion	Maldison	121-75-5		1					DSEN OTO Sk	(e)
Maleic anhydride	2,5-Furandione	108-31-6	0.0025	0.01					DSEN RSEN Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Manganese cyclopenta-dienyl tricarbonyl (as Mn)		12079-65-1		0.1					OTO	
Manganese fume, dust and compounds (as Mn) (inhalable)		7439-96-5		0.1					OTO	
Manganese fume, dust and compounds (as Mn) (respirable)		7439-96-5		0.02					OTO	
Man-Made Vitreous (Silicate) Fibres (MMVF)	Synthetic Mineral Fibres (SMF)									
►Refractory Ceramic Fibres (RCF)(g), Special Purpose Glass Fibres(h) and other SMF not otherwise listed or that fail to meet the definition of low Biopersistence SMF(j)			0.5 f/mL (respirable dust) and 2 mg/m^3 (inhalable dust)							(g) (h) (j)
►[Glass wool, rock (stone) wool, slag wool and continuous glass filament](h)(i) and Low Biopersistence SMF(j)			2 mg/m^3 (inhalable dust)							(h) (i) (j)
Mercury, alkyl compounds (as Hg)				0.01		0.03			OTO Sk	(e)
Mercury, aryl compounds (as Hg)				0.1					OTO Sk	(e)
Mercury, elemental vapour (as Hg)		7439-97-6	0.003	0.025					OTO Sk	(e)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Mercury, inorganic divalent compounds (as Hg)			0.003	0.025					OTO Sk	(e)
Mercury, inorganic monovalent compounds (as Hg)				0.1					OTO Sk	(e)
Mesityl oxide	4-Methylpent-3-en-2-one; Isobutenyl methyl ketone; Isopropylidene acetone	141-79-7	2	8.1						
Methacrylic acid		79-41-4	20	70						
Methomyl	Lannate	16752-77-5		0.2						
Methoxychlor		72-43-5		10						
1-Methoxy-2-propanol acetate	2-Propanol, 1-methoxy-, acetate	108-65-6	50	274	100	548				
2-Methoxyethanol	Ethylene glycol, monomethyl ether; Methyl cellosolve; Methyl glycol	109-86-4	0.1	0.3					Sk	
2-Methoxyethyl acetate	Ethanol, 2-methoxy-, acetate; Methyl glycol acetate; Methyl cellosolve acetate	110-49-6	0.1	0.5					Sk	
(2-Methoxymethylethoxy) propanol	Propanol, 1(or 2)-(2-methoxymethylethoxy)-	34590-94-8	50	305					Sk	
4-Methoxyphenol	Mequinol; Hydroquinone monomethyl ether; p-Hydroxyanisole; p-Methoxyphenol	150-76-5		5					DSEN	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Methyl acetate	Acetic acid, methyl ester	79-20-9	200	606	250	757				
Methyl acetylene	1-Propyne	74-99-7	1000	1640						
Methyl acetylene-propadiene mixture	MAPP		1000	1640	1250	2050				
Methyl acrylate	2-Propenoic acid, methyl ester	96-33-3	2	7					DSEN Sk	
Methyl alcohol	Methanol	67-56-1	100	130					Sk	(f)
N-Methyl aniline	Benzenamine, N-methyl-	100-61-8	0.5	2.2					Sk	
Methyl bromide	Methane, bromo-	74-83-9	1	3.89					Sk	
Methyl chloride	Methane, chloro-	74-87-3	20	42	80	167			DSEN Sk	
Methyl demeton		8022-00-2		0.5					Sk	
Methyl ethyl ketone	MEK; 2-Butanone	78-93-3	200	590	300	885			Sk	(e)
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4					0.2	1.5		
Methyl formate	Formic acid, methyl ester	107-31-3	50	123	100	245			Sk	
Methyl hydrazine		60-34-4	0.01	0.019					Sk	
Methyl iodide	Methane, iodo-	74-88-4	2	12					Sk	
Methyl isoamyl ketone	2-Hexanone, 5-methyl-	110-12-3	20	93	40	186				
Methyl isobutyl carbinol	2-Pentanol, 4-methyl-	108-11-2	25	104	40	167				
Methyl isobutyl ketone	2-Pentanone, 4-methyl-; MIBK	108-10-1	20	82	75	307				(e)
Methyl isocyanate	Methane, isocyanato-	624-83-9	0.02	0.047	0.06	0.14			DSEN RSEN Sk	(e)
Methyl isopropyl ketone	2-Butanone, 3-methyl-	563-80-4	20	70						
Methyl mercaptan	Methanethiol	74-93-1	0.5	0.98						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	50	208	100	416			DSEN	
Methyl n-amyl ketone	2-Heptanone	110-43-0	50	233						
Methyl n-butyl ketone	2-Hexanone	591-78-6	5	20	10	40			Sk	
Methyl parathion		298-00-0		0.02					OTO Sk	(e)
Methyl propyl ketone	2-Pentanone	107-87-9			150	529				
Methyl silicate	Silicic acid (H4SiO4), tetramethyl ester; Tetramethyl orthosilicate	681-84-5	1	6						
alpha-Methyl styrene	Benzene, (1-methylethenyl)-	98-83-9	50	242	100	483				
1-Methyl-2-pyrrolidone	N-Methyl-2-pyrrolidinone	872-50-4	20	80					Sk	
Methylacrylonitrile	2-Propenenitrile, 2-methyl-	126-98-7	1	2.7					DSEN Sk	
2-Methylbutyl acetate		624-41-9	50	266	100	532				
Methylal	Methane, dimethoxy-	109-87-5	1000	3110						
Methylamine	Methanamine	74-89-5	10	13						
Methylcyclohexane	Cyclohexane, methyl-	108-87-2	200	810						
Methylcyclohexanol		25639-42-3	50	234						
o-Methylcyclohexanone		583-60-8	50	229	75	344			Sk	
Methylcyclopentadienyl manganese tricarbonyl (as Mn)	Manganese, tricarbonyl[(1,2,3,4,5-.eta.)-1-methyl-2,4-cyclopentadien-1-yl]-	12108-13-3		0.2					OTO Sk	
Methylene bis(4-cyclo-hexylisocyanate)	Cyclohexane, 1,1'-methylenebis[4-isocyanato-	5124-30-1		0.02		0.07			DSEN RSEN Sk	(e)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Methylene chloride	Methane, dichloro-; Dichloromethane	75-09-2	50	174					Sk	
4,4'-Methylene dianiline	Benzenamine, 4,4'-methylenebis-; DADPM; MDA; DDM	101-77-9	0.1	0.81					DSEN Sk	
5-Methylheptan-3-one	3-Heptanone, 5-methyl-; Ethyl amyl ketone	541-85-5	10	53	20	107				
Methyl-tert butyl ether	Propane, 2-methoxy-2-methyl-	1634-04-4	50	180						
Metribuzin		21087-64-9		5						
Mevinphos		7786-34-7		0.01					OTO Sk	
Mica	Mica-group minerals; Dimonite; Micatex	12001-26-2		2.5						
Mineral spirits (mineral turpentine)		64742-82-1 64742-95-6 64742-48-9	50	296	100	593			OTO	
Mineral spirits (white spirits)	Stoddard solvent	8052-41-3	50	296	100	593			OTO	
Molybdenum, insoluble compounds (as Mo) (inhalable)		7439-98-7		10						
Molybdenum, insoluble compounds (as Mo) (respirable)		7439-98-7		3						
Molybdenum, soluble compounds (as Mo)		7439-98-7		0.5						
Monochloroacetic acid	Acetic acid, chloro-	79-11-8	0.5	2					Sk	
Monocrotophos		6923-22-4		0.05					OTO Sk	
Morpholine		110-91-8	20	71					Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Naled	Dibrom; Dimethyl-1,2-dibromo-2,2-dichloroethylphosphate	300-76-5		0.1					OTO Sk	
Naphthalene		91-20-3	10	52					Sk	(e)
Nickel carbonyl (as Ni)		13463-39-3					0.05	0.12		(e)
Nickel, metal and insoluble compounds (as Ni)	Nickel dichloride; Nickel dinitrate; Nickel sulfide roasting (fume and dust); Nickel salt, nitric acid	7718-54-9 13138-45-9 7440-02-0 14216-75-2		0.1					DSEN	(e) (f)
Nickel,soluble compounds (as Ni)				0.1					DSEN RSEN	(e) (f)
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54-11-5		0.5					Sk	
Nitrapyrin	2-Chloro-6-(trichloromethyl) pyridine	1929-82-4		10		20			DSEN Sk	
Nitric acid		7697-37-2	2	5.2						
Nitric oxide	Nitrogen oxide (NO)	10102-43-9	2	2.5						
5-nitro-o-toluidine (inhalable)		99-55-8		1						
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6		3					Sk	
Nitrobenzene	Nitrobenzol	98-95-3	1	5					Sk	
p-Nitrochlorobenzene	Benzene, 1-chloro-4-nitro-	100-00-5	0.1	0.64					Sk	
Nitroethane		79-24-3	100	307						
Nitrogen dioxide	Nitrogen oxide (NO_2)	10102-44-0	3	5.6	5	9.4				
Nitrogen trifluoride		7783-54-2	10	29						
Nitroglycerine	1,2,3-Propanetriol, trinitrate	55-63-0	0.01	0.1	0.02	0.2			DSEN Sk	
Nitromethane		75-52-5	20	50						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
1-Nitropropane		108-03-2	25	91						
2-Nitropropane		79-46-9	10	36						
3-Nitrotoluene		99-08-1	2	11					Sk	
4-Nitrotoluene		99-99-0	2	11					Sk	
Nitrous oxide	Nitrogen oxide, (N_2O)	10024-97-2	50	90						
Nonane		111-84-2	200	1050						
Octachloronaphthalene		2234-13-1		0.1		0.3			Sk	
Octane		111-65-9	300	1400	375	1750				
Oil mist, refined mineral	Paraffin oils	8012-95-1		5						
Osmium tetroxide (as Os)	Osmium oxide (OsO_4), (T-4)-	20816-12-0	0.0002	0.002						
Oxalic acid	Ethanedioic acid	144-62-7		1		2				
2,2'-Oxybis[ethanol]	Diethylene glycol	111-46-6	23	100						
Oxygen difluoride		7783-41-7					0.05	0.11		
Ozone		10028-15-6					0.1	0.2		
Paraffin wax, fume		8002-74-2		2						
Paraquat (respirable)		4685-14-7		0.05					OTO Sk	
Parathion		56-38-2		0.1					OTO Sk	(e)
PCBs (42% Chlorine)	Polychlorinated biphenyls	53469-21-9		1		2			Sk	(f)
PCBs (54% Chlorine)	Chlorobiphenyl	11097-69-1		0.5		1			Sk	(f)
Pentaborane		19624-22-7	0.005	0.013						
Pentachloronaphthalene		1321-64-8		0.5					Sk	
Pentachloronitrobenzene	Quintozene (ISO)	82-68-8		0.5					DSEN	
Pentachlorophenol		87-86-5		0.5					Sk	(e)
Pentaerythritol	1,3-Propanediol, 2,2-bis(hydroxymethyl)-	115-77-5		10						(a)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Pentane (all isomers)	n-pentane; neo-pentane; isopentane	109-66-0 463-82-1 78-78-4	1000	3000						
2,3-Pentanedione		600-14-6	0.02	0.083						
2,4-Pentanedione		123-54-6	25	102					Sk	
Peracetic acid	Ethaneperoxoic acid	79-21-0					0.4	1.24		
Perchloroethylene	Ethene, tetrachloro-	127-18-4	20	138	40	275			OTO Sk	(e)
Perchloromethyl mercaptan		594-42-3	0.1	0.76						
Perchloryl fluoride		7616-94-6	3	13						
Perfluoroisobutylene		382-21-8					0.01	0.082		
Perlite dust	Perlite, volcanic glass	93763-70-3		10						(a)
Persulfates, ammonium- and alkali metal salts		7727-54-0 7727-21-1 7775-27-1		0.1					DSEN RSEN	
Petrol (gasoline)			300	900			500	1480		
Phenol	Carbolic acid	108-95-2	1	4					Sk	
Phenothiazine	10H-Phenothiazine	92-84-2		5					Sk	
Phenyl ether, vapour	Benzene, 1,1'-oxybis-	101-84-8	1	7	2	14				
Phenyl glycidyl ether	PGE; Oxirane, (phenoxymethyl)-	122-60-1	1	6.1					DSEN Sk	
Phenyl isocyanate		103-71-9	0.005	0.024						(e)
Phenyl mercaptan	Benzenethiol	108-98-5	0.1	0.45					Sk	
m-Phenylenediamine	1,3-Benzenediamine	108-45-2		0.1					DSEN Sk	
o-Phenylenediamine	1,2-Benzenediamine	95-54-5		0.1					DSEN	
p-Phenylenediamine	1,4-Benzenediamine	106-50-3		0.1					DSEN	
Phenylhydrazine		100-63-0	0.1	0.44					DSEN Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Phenylphosphine		638-21-1					0.05	0.23		
Phorate		298-02-2		0.05					OTO Sk	
Phosgene	Carbonic dichloride	75-44-5	0.1	0.41	0.4	1.6				
Phosphine		7803-51-2	0.05	0.07			0.15	0.21		
Phosphoric acid	Orthophosphoric acid	7664-38-2		1		3				
Phosphorus (yellow)		7723-14-0		0.01						
Phosphorus oxychloride	Phosphoryl chloride	10025-87-3	0.02	0.13						
Phosphorus pentachloride	Phosphorane, pentachloro-	10026-13-8	0.1	0.85						
Phosphorus pentasulfide	Phosphorus sulfide (P_2S_5)	1314-80-3		1		3				
Phosphorus trichloride		7719-12-2	0.2	1.1	0.5	2.8				
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9	0.0003	0.002					DSEN RSEN Sk	
m-Phthalodinitrile	1,3-Benzenedicarbonitrile	626-17-5		5						
Picloram	Tordon	1918-02-1		10						
Picric acid	Phenol, 2,4,6-trinitro-	88-89-1		0.1						
Pindone	Pival; 2-Pivalyl-1,3-indandione	83-26-1		0.1						
Piperazine and salts		110-85-0 142-64-3	0.03	0.1	0.09	0.3			DSEN RSEN Sk	
Piperidine		110-89-4	1	3.5					Sk	
Platinum, metal		7440-06-4		1						
Platinum, soluble salts (as Pt)				0.002						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Polyvinyl chloride (respirable dust)	Ethene, chloro-, homopolymer	9002-86-2		1						
Portland cement (respirable dust)	Cement kiln dust; Kiln baghouse dust; Kiln precipitator catch; Portland cement kiln dust; Waste kiln dust	65997-15-1		1						(a)
Potassium hydroxide	Caustic potash	1310-58-3						2		
Propane-1,2-diol total (vapour and particulates)	1,2-Propanediol; 1,2-Propylene glycol	57-55-6		50						(k)
Propargyl alcohol	2-Propyn-1-ol	107-19-7	1	2.3					Sk	
beta-Propiolactone	2-Oxetanone	57-57-8	0.5	1.5					DSEN Sk	(f)
Propionic acid	Propanoic acid	79-09-4	10	30						
Propoxur	PHC; Baygon; Arprocarb	114-26-1		0.5					Sk	
Propranolol		525-66-6	0.188	2	0.565	6				
Propyl acetate (all isomers)	Acetic acid, propyl ester	109-60-4 108-21-4	100	417	150	626				
Propyl alcohol	1-Propanol	71-23-8	200	492	250	614				
Propylene dichloride	Propane, 1,2-dichloro-	78-87-5	75	347	110	508			Sk	
Propylene glycol dinitrate	1,2-Propanediol, dinitrate	6423-43-4	0.01	0.069					Sk	
Propylene glycol monomethyl ether	2-Propanol, 1-methoxy-	107-98-2	100	369	150	553				
Propylene imine	Aziridine, 2-methyl-	75-55-8	0.2	0.5					Sk	
Propylene oxide	Oxirane, methyl-; 1,2-Epoxypropane	75-56-9	2	4.8					Sk	
n-Propyl nitrate		627-13-4	25	107						
Pyrethrum	Pyrethrins and Pyrethroids	8003-34-7		1					Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Pyridine		110-86-1	1	3.1					Sk	
Quinone	2,5-Cyclohexadiene-1,4-dione	106-51-4	0.1	0.44						
Resorcinol	1,3-Benzenediol	108-46-3	10	45					DSEN Sk	
Rhodium, insoluble compounds (as Rh)				1						
Rhodium, metal		7440-16-6		1						
Rhodium, soluble compounds (as Rh)				0.01						
Ronnel (inhalable and vapour)	Fenchlorphos	299-84-3		5					OTO	(k)
Rosin core solder pyrolysis products (as formaldehyde)				0.1					DSEN Sk	
Rotenone (commercial)	Derris, commercial	83-79-4		5					Sk	
Rouge dust				10						(a)
Selenium compounds (as Se) excluding hydrogen selenide				0.1					Sk	
Selenium hexafluoride (as Se)		7783-79-1	0.05	0.16						
Sesone	2,4-DES sodium; Crag Herbicide; Sodium 2,4-dichloro phenoxyethyl sulfate	136-78-7		10						
Silica – Amorphous										
►Diatomaceous earth (uncalcined)	Kieselguhr	61790-53-2		10						(a)

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
►Silica Fume (thermally generated) (respirable dust)	Silica; Acticel; Colloidal silica; Colloidal silicon dioxide	69012-64-2		2						(a)
►Fumed Silica (respirable dust)		112945-52-5		2						(a)
►Precipitated silica	Silica gel, precipitated, crystalline free	112926-00-8		10						(a)
►Silica gel		112926-00-8		10						(a)
Silica - crystalline										
►Cristobalite (respirable dust)	Silicon dioxide	14464-46-1		0.05						(e) (f)
►Quartz (respirable dust)	Quartz (SiO_2)	14808-60-7		0.05						(e) (f)
►Tridymite (respirable dust)		15468-32-3		0.05						(e) (f)
►Tripoli (respirable dust)		1317-95-9		0.05						(e) (f)
Silica, fused		60676-86-0	See Silica – crystalline							
Silicon		7440-21-3		10						(a)
Silicon carbide (non-fibrous dust) (inhalable)		409-21-2		10						(a)
Silicon carbide (non-fibrous dust) (respirable)		409-21-2		3						(a)
Silicon tetrahydride	Silane	7803-62-5	5	6.6						
Silver, metal		7440-22-4		0.1						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Silver, soluble compounds (as Ag)				0.01						
Soapstone				6						(a)
Soapstone (respirable dust)				3						(a)
Sodium azide		26628-22-8					0.11	0.3		(d)
Sodium bisulphite	Sulfurous acid, monosodium salt	7631-90-5		5						
Sodium fluoroacetate		62-74-8		0.05					Sk	
Sodium hydroxide	Caustic soda	1310-73-2						2		
Sodium metabisulphite	Disulfurous acid, sodium salt (1:2)	7681-57-4		5						
Starch		9005-25-8		10						(a)
Stearates (inhalable)				10						(a)
Stearates (respirable)				3						(a)
Stibine		7803-52-3	0.1	0.51						
Strychnine		57-24-9		0.15						
Styrene, monomer	Benzene, ethenyl-; Vinylbenzene	100-42-5	20	85	40	170			OTO	(e)
Subtilisins (Proteolytic enzymes as 100% pure crystalline enzyme)		1395-21-7						0.00006	RSEN	
Sucrose	.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl	57-50-1		10						(a)
Sulfotep	TEDP; O,O,O,O-Tetraethyl dithiopyrophosphate	3689-24-5	0.007	0.1					Sk	
Sulfur dioxide		7446-09-5			0.25	0.65				

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
Sulfur hexafluoride	Sulfur fluoride (SF_6)	2551-62-4	1000	5970						
Sulfur monochloride	Sulfur chloride (S_2Cl_2)	10025-67-9					1	5.5		
Sulfur pentafluoride	Disulfur decafluoride	5714-22-7					0.01	0.1		
Sulfur tetrafluoride	Sulfur fluoride (SF_4), (T-4)-	7783-60-0					0.1	0.44		
Sulfuric acid		7664-93-9		0.1						
Sulfuryl fluoride		2699-79-8	5	21	10	42				
Sulprofos	Bolstar	35400-43-2	0.008	0.1					OTO Sk	
Synthetic mineral fibres (SMF)	Man-Made Vitreous (Silicate) Fibres (MMVF)		See Man-Made Vitreous (Silicate) Fibres							
Talc (respirable) (containing no asbestos fibres)	Magnesium silicate talc	14807-96-6		2						
Tantalum, metal and oxide dusts		7440-25-7		5						
Tellurium and compounds (as Te)				0.1						
Tellurium hexafluoride (as Te)		7783-80-4	0.02	0.1						
Temephos	Abate	3383-96-8	0.1	2					OTO Sk	
Terephthalic acid		100-21-0		5						
Tetraethyl pyrophosphate	TEPP	107-49-3	0.004	0.047					Sk	
Terphenyls		61788-32-7					0.5	4.7		
1,1,2,2-Tetrabromoethane	Ethane, 1,1,2,2-tetrabromo-	79-27-6	1	14						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
1,1,2,2-Tetrachloro-1,2-difluoroethane	Ethane, 1,1,2,2-tetrachloro-1,2-difluoro-	76-12-0	500	4170						
1,1,1,2-Tetrachloro-2,2-difluoroethane	Ethane, 1,1,1,2-tetrachloro-2,2-difluoro-	76-11-9	500	4170						
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5	1	7					Sk	
Tetrachloronaphthalene		1335-88-2		2					Sk	
Tetraethyl lead (as Pb)	Plumbane, tetraethyl-	78-00-2		0.1					OTO Sk	(e) (f)
1,1,1,2-Tetrafluoroethane	Ethane, 1,1,1,2-tetrafluoro-; HFC 134a	811-97-2	1000	4240						
Tetrafluoroethylene		116-14-3	2	8.2						
Tetrahydrofuran		109-99-9	50	147					Sk	
Tetramethyl lead (as Pb)	Plumbane, tetramethyl-	75-74-1		0.15					OTO Sk	(e) (f)
Tetramethyl succinonitrile		3333-52-6	0.5	2.8					Sk	
Tetrasodium pyrophosphate	Diphosphoric acid, tetrasodium salt	7722-88-5		5						
Tetryl	Benzenamine, N-methyl-N,2,4,6-tetranitro-	479-45-8		1.5						
Thallium, soluble compounds (as Tl)				0.02					Sk	(e)
4,4'-Thiobis(6-tert-butyl-m-cresol)	Phenol, 4,4'-thiobis[2-(1,1-dimethylethyl)-5-methyl-	96-69-5		10						
Thioglycolic acid	Acetic acid, mercapto-	68-11-1	1	3.8					DSEN Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³		
Thionyl chloride		7719-09-7					0.2	1		
Thiram	Thioperoxydicarbonic diamide ($[(H_2N)C(S)]_2S_2$), tetramethyl-	137-26-8		1					DSEN RSEN Sk	
Tin, metal and inorganic compounds				2						(f)
Tin, organic compounds (as Sn)				0.1					OTO Sk	
Titanium dioxide		13463-67-7		10						(a)
Toluene	Benzene, methyl-; Toluol	108-88-3	20	75					OTO	(e)
m-Toluidine	Benzenamine, 3-methyl-	108-44-1	2	8.8					Sk	
o-Toluidine	Benzenamine, 2-methyl-	95-53-4	2	8.8					Sk	(f)
p-Toluidine	Benzenamine, 4-methyl-	106-49-0	2	8.8					DSEN Sk	
Tributyl phosphate	Phosphoric acid, tributyl ester	126-73-8	0.2	2.2					OTO	
1,1,2-Trichloro-1,2,2-trifluoroethane	Fluorocarbon 113; Freon 113	76-13-1	1000	7670	1250	9590				
Trichloroacetic acid		76-03-9	1	6.7						
1,2,4-Trichlorobenzene		120-82-1					5	37		
1,1,1-Trichloroethane		71-55-6	100	555	200	1110				
1,1,2-Trichloroethane		79-00-5	10	55					Sk	
Trichloroethylene		79-01-6	10	54	40	216			OTO	(e)
Trichlorofluoromethane	Fluorocarbon 11; Freon 11	75-69-4					1000	5620		
Trichloronaphthalene		1321-65-9		5					Sk	
1,2,3-Trichloropropane		96-18-4	10	60					Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Triethanolamine	Ethanol, 2,2',2''-nitrilotris-	102-71-6		5					Sk	
Triethylamine	Ethanamine, N,N-diethyl-	121-44-8	1	4.2	2	8.4			Sk	
Trifluorobromomethane		75-63-8	1000	6090						
Triglycidylisocyanurate	TGIC; Araldite PT 810	2451-62-9		0.08					DSEN Sk	
Trimellitic anhydride	5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-	552-30-7	0.00006	0.0005			0.0002	0.002	DSEN RSEN Sk	
Trimethyl benzene (all isomers)		25551-13-7	20	100						
Trimethyl phosphite	Phosphorous acid, trimethyl ester	121-45-9	2	10					OTO	
Trimethylamine	Methanamine, N,N-dimethyl-	75-50-3	10	24	15	36				
2,4,5-T	2,4,5-Trichlorophenoxyacetic acid	93-76-5		10					Sk	
2,4,6-Trinitrotoluene	TNT; Benzene, 2-methyl-1,3,5-trinitro-	118-96-7		0.1					Sk	
Triorthocresyl phosphate	Phosphoric acid, tris(2-methylphenyl) ester	78-30-8		0.1					OTO Sk	
Triphenyl amine	Benzenamine, N,N-diphenyl-	603-34-9		5						
Triphenyl phosphate	Phosphoric acid, triphenyl ester	115-86-6		3					OTO	
Tungsten, insoluble compounds (as W)		7440-33-7		3						
Tungsten, metal and compounds (as W)		7440-33-7		3						

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Tungsten, soluble compounds (as W)		7440-33-7		3						
Turpentine (wood)	Turpentine oil; Sulfate turpentine	8006-64-2	100	557					DSEN Sk	
Uranium (natural), soluble and insoluble compounds (as U)				0.2						(e)
n-Valeraldehyde	Pentanal	110-62-3	50	176						
Vanadium (as V_2O_5), (respirable dust and fume)	Vanadium pentoxide	1314-62-1		0.05						
Vegetable oil mists (except castor oil, cashew nut or similar irritant oils)				10						
Vinyl acetate	Acetic acid, ethenyl ester	108-05-4	10	35	15	53				
Vinyl cyclohexene dioxide	7-Oxabicyclo[4.1.0] heptane, 3-oxiranyl-	106-87-6	10	57					Sk	
Vinyl toluene	Benzene, ethenylmethyl-	25013-15-4	20	97	40	193			OTO	
Vinylidene chloride	Ethene, 1,1-dichloro-	75-35-4	5	20	20	79				
N-vinyl-2-pyrrolidone		88-12-0	0.01	0.046					Sk	
Warfarin		81-81-2		0.01					Sk	
Welding fumes (not otherwise classified)				1						
Wood dust (certain hardwood such as beech)				1					DSEN RSEN Sk	
Wood dust (softwood)				2					DSEN RSEN Sk	

Chemical name	Synonym	CAS No.	TWA		STEL		Peak limit		Advisory notation	Notes
			ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3		
Xylene (o-, m-, p-isomers)	o-Xylene; m-Xylene; p-Xylene; 1,2-Dimethylbenzene; 1,3-Dimethylbenzene; 1,4-Dimethylbenzene	1330-20-7 95-47-6 108-38-3 106-42-3	80	350	150	655			OTO	(e)
m-Xylene-alpha,alpha'-diamine		1477-55-0						0.1	Sk	
Xylidine (all isomers)	Xylidine – isomer mix; 2,6-dimethylaniline; 2,3-dimethylaniline; 3,4-dimethylaniline; 2,4-dimethylaniline; 2,5-dimethylaniline; 3,5-dimethylaniline	1300-73-8 87-62-7 87-59-2 95-64-7 95-68-1 95-78-3 108-69-0	0.5	2.5					Sk	
Yttrium, metal and compounds (as Y)		7440-65-5		1						
Zinc chloride, fume		7646-85-7				2				
Zinc oxide (dust and fume)		1314-13-2		2		10				(a)
Zirconium compounds (as Zr)				5		10				

Appendix B – Non-threshold genotoxic carcinogens

Non-threshold genotoxic carcinogens (NTGCs) can cause genetic damage and may lead to cancer. Unlike other airborne contaminants, a practical, protective exposure level cannot be assigned for NTGCs due to limited data and the nature of their effects. Consequently, no WEL have been specified for the NTGCs listed in the table below.

These chemicals pose a significant risk to workers and PCBUs have a duty to eliminate risks from NTGCs so far as is reasonably practicable. If elimination is not reasonably practicable, the risk of exposure must be minimised as far as reasonably practicable. The health and safety risk these chemicals pose is substantial; you are encouraged to seek advice from a suitably qualified professional such as an occupational hygienist if you work with these chemicals.

Some of the NTGCs in the table below are also subject to specific requirements under the model WHS Regulations as they:

- are prohibited carcinogens, restricted carcinogens or restricted hazardous chemicals (see model WHS regulations 340 and 380–384 and Schedule 10), or
- meet the requirements for health monitoring (model WHS regulations 368, 370 and Schedule 14).

These controls have been specified in the table below for the relevant NTGCs.

If you are uncertain whether chemicals used or generated in your workplace are captured by the NTGC listings, you should seek advice from your WHS regulator or a qualified professional, such as an occupational hygienist.

	NTGC	CAS number	Advisory notations (section 3.3)	Specific requirement(s) in the model WHS Regulations
1	Acrylamide	79-06-1	DSEN Sk	
2	Acrylonitrile (Vinyl cyanide)	107-13-1	DSEN Sk	Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required Health monitoring prescribed under Schedule 14
3	Allyl chloride (3-Chloro-1-propene)	107-05-1	Sk	
4	Allyl glycidyl ether (AGE, Allyl 2,3-epoxypropyl ether)	106-92-3	DSEN Sk	
5	Anisidine (o, p-isomers) (Methoxyaniline)	29191-52-4	Sk	
6	o-Anisidine	90-04-0	Sk	
7	p-Anisidine	104-94-9	Sk	

	NTGC	CAS number	Advisory notations (section 3.3)	Specific requirement(s) in the model WHS Regulations
8	Benzidine	92-87-5		Prohibited carcinogen (Schedule 10, Table 10.1*) – WHS regulator authorisation required for genuine research and analysis. No other uses permitted.
9	(bis)chloromethyl ether	542-88-1		Prohibited carcinogen (Schedule 10, Table 10.1*) – WHS regulator authorisation required for genuine research and analysis. No other uses permitted.
10	1,3-Butadiene	106-99-0		
11	Catechol (Pyrocatechol, o-Dihydroxybenzene)	120-80-9	DSEN Sk	
12	beta-Chloroprene (2-Chloro-1,3-butadiene)	126-99-8	Sk	
13	Chromium VI compounds (including zinc chromates)	Various, includes 7440-47-3 (Cr metal), 18540-29-9 (Cr (VI)) and others (>30)	DSEN Sk	Abrasive blasting at a concentration more than 0.5% chromium not permitted unless WHS regulator has issued an exemption (Schedule 10, Table 10.3) Health monitoring prescribed for inorganic chromium under Schedule 14
14	Coal tar pitch volatiles (as benzene solubles)	65996-93-2	DSEN	
15	1,2-Dibromo ethane (ethylene dibromide)	106-93-4	Sk	Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required. Authorisation can only be given for use as a fumigant or for genuine research or analysis
16	3,3'-Dichlorobenzidine	91-94-1	Sk	Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required
17	Diethyl sulfate	64-67-5		Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required
18	Dimethylcarbamoyl chloride	79-44-7	Sk	
19	Dimethyl sulfate	77-78-1	DSEN Sk	Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required
20	Dinitrotoluene	25321-14-6	Sk	
21	Ethylene dichloride (1,2-Dichloroethane)	107-06-2	Sk	

	NTGC	CAS number	Advisory notations (section 3.3)	Specific requirement(s) in the model WHS Regulations
22	Ethylene oxide (Oxirane)	75-21-8	DSEN Sk	
23	Ethylenimine (Aziridine)	151-56-4	Sk	
24	Hydrazine (Diamine)	302-01-2	DSEN Sk	
25	Lead chromate (as Cr)	7758-97-6	DSEN	Abrasive blasting at a concentration of more than 0.1% as lead, or which would expose the operator to levels in excess of those set in the regulations covering lead, is not permitted unless WHS regulator has issued an exemption (Schedule 10, Table 10.3) Health monitoring prescribed for inorganic lead under Schedule 14
26	4,4'-Methylene bis(2-chloroaniline) (MOCA, MBOCA, 2,2'-Dichloro-4,4'-methylenedianiline)	101-14-4	Sk	Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required Health monitoring prescribed under Schedule 14
27	2-Nitrotoluene	88-72-2		
28	Propane sultone	1120-71-4	Sk	
29	Polycyclic aromatic hydrocarbon (PAH) mixture when containing benzo[a]pyrene	50-32-8 (benzo[a] pyrene)	DSEN Sk	Health monitoring prescribed under Schedule 14
30	Tetranitromethane (TNM)	509-14-8		
31	Urethane	51-79-6	Sk	
32	Vinyl bromide (Bromoethylene)	593-60-2		
33	Vinyl chloride, monomer (Chloroethylene)	75-01-4		Restricted carcinogen (Schedule 10, Table 10.2*) – WHS regulator authorisation required Health monitoring prescribed under Schedule 14

** Note: The prohibition of the use of carcinogens listed in table 10.1 and the restriction of the use of carcinogens listed in table 10.2 apply to the pure substance and where the substance is present in a mixture at a concentration greater than 0.1%, unless otherwise specified in the relevant table.*

Appendix C – List of amendments

Date	Amendments
29 October 2024	Corrected TWA (mg/m^3) for paraquat from 0.1 mg/m^3 to 0.05mg/m^3
	Changed listing for silica, fused to refer to Silica – crystalline
	Removed silicon carbide (fibres)
28 May 2025	Added TWA 0.1 mg/m^3 for mercury aryl compounds
	Added 8-hr TWA 2 mg/m^3 for fumed silica
	Removed incorrect WEL for tin oxide and inorganic compounds except SnH4 (as Sn)
	Removed incorrect WEL for tin, metal
	Removed incorrect health monitoring note (e) from WEL for methylene chloride
	Removed incorrect WEL for propane-1,2-diol: particulates only
17 November 2025	Corrected note (c) definition
	Updated WEL for calcium sulfate to reflect correct particle size fraction (respirable)
	Updated WEL for gallium arsenide to reflect correct particle size fraction (respirable)
	Amended 8-hr TWA (mg/m^3) for aluminium (welding fumes) (as Al) from 5 mg/m^3 to 1 mg/m^3
5 November 2026	Updated reference to supplementary guidance from *Guidance on the interpretation of Workplace exposure standards for airborne contaminants* to *Guide for PCBUs: Air monitoring and the workplace exposure limits for airborne contaminants* and *Technical guide: Air monitoring and the workplace exposure limits for airborne contaminants*
	Corrected TWA (mg/m^3) for amitrole from 2mg/m^3 to 0.2mg/m^3
	Corrected TWA (mg/m3) for platinum, metal from 1mg/m$_3$ to 0.1mg/m^3
	Corrected Peak (ppm) for trimellitic anhydride from 0.00002ppm to 0.0002ppm
	Corrected CAS numbers for hydrogenated terphenyls, silica fume, fumed silica and terphenyls
	Addition of notes (l) and (k)
	Replaced name for synthetic mineral fibres with man made vitreous fibres. Moved synthetic mineral fibres to synonyms column.