List of atmospheric agents affecting mine sites

Disclaimer: The units of measurement included in this list are based on the Department's Health and hygiene code index and are aligned with how substances are recorded in the Safety Regulation System (SRS). This list is intended as a guide only and may not be comprehensive. Some chemicals or substances may be missing, and there may be errors or inaccuracies. Users are encouraged to refer to Safe Work Australia's *Changes to workplace exposure limits* guide and the current workplace exposure standards, to verify applicable exposure limits, substances and units of measurement.

Exposure agent		**Workplace exposure standards** In effect until 30 November 2026			**Workplace exposure limits** As of 1 December 2026		
Agent description	**Unit of measurement**	**TWA**	**Peak**	**STEL**	**TWA**	**Peak**	**STEL**
1,1,1-Trichloroethane	ppm	100		200	100		200
1,1,2,2-Tetrabromoethane	ppm	1			1		
Acetaldehyde	ppm	20		50	20		50
Acetone	ppm	500		1000	250		500
Aldehyde	ppm	1			1		
Aluminium (metal dust or oxide, as Al)	mg/m³	10			10		
Aluminium welding fume (as Al)	mg/m³	5			1		
Ammonia	ppm	25		35	20		35
Antimony	mg/m³	0.5			0.5		
Arsenic	mg/m³	0.05			0.01		
Benzene *(deferred until 1 June 2027)*	ppm	1			1		
Beryllium & compounds	mg/m³	0.002			0.00002		0.0002
Bromoform	ppm	0.5			0.5		
Cadmium	mg/m³	0.01			0.001		
Calcium carbonate (limestone)	mg/m³	10			10		
Calcium hydroxide (slaked lime)	mg/m³	5			1		4
Calcium oxide (quicklime)	mg/m³	2			1		
Calcium sulphate (gypsum)	mg/m³	10			1.5		
Carbon black	mg/m³	3			3		
Carbon dioxide	ppm	5000		30000	5000		30000

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Carbon disulphide	ppm	10			1		
Carbon monoxide	ppm	30			20		
Chlorine	ppm		1			1	
Chromium (metal or compounds, as Cr)	mg/m³	0.5			0.5		
Chromium (VI) compounds (as Cr)	mg/m³	0.05					
Coal dust (<5% silica/quartz)	mg/m³	3			1.5		
Copper (dust or mist, as Cu)	mg/m³	1			1		
Copper (fume, as Cu)	mg/m³	0.2			0.2		
Cobalt	mg/m³	0.05			0.02		
Cyanides (as Cn)	mg/m³	5			1		5
Diesel particulate matter (as elemental carbon) *(subject to regulatory impact assessment)*	mg/m³	0.1			0.1		
Diisobutyl ketone (DIBK)	ppm	25			25		
Ethanol	ppm	1000			200		800
Ethyl acetate	ppm	200		400	200		400
Ferrovanadium dust	mg/m³	1		3	1		3
Fluorides (as F)	mg/m³	2.5			2.5		
Formaldehyde	ppm	1		2	1		2
Graphite (non-fibrous)	mg/m³	3			3		
Hydrogen chloride	ppm		5			2	
Hydrogen cyanide	ppm		10			10	
Hydrogen fluoride (as F)	ppm		3		0.5	2	
Hydrogen sulphide	ppm	10		15	10		15
Iron oxide (fume, as Fe)	mg/m³	5			5		
Isobutyl alcohol	ppm	50			50		
Isocyanates (as NCO)	mg/m³	0.02		0.07	0.02		0.07

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Isopropyl alcohol	ppm	400		500	200		400
Lead, inorganic dusts and fumes	mg/m³	0.05			0.05		
Magnesium oxide (as Mg)	mg/m³	10			10		
Manganese fume, dust and compounds (as Mn) (respirable)	mg/m³	1		3	0.02		
Manganese fume, dust and compounds (as Mn) (inhalable)	mg/m³	1			0.1		
Mercury and compounds	mg/m³	0.025			0.025		
Methyl chloride	ppm	50		100	20		80
Methyl ethyl ketone (MEK)	ppm	150		300	200		300
Methyl ethyl ketone peroxide	ppm		0.2			0.2	
Methyl isobutyl ketone	ppm	50		75	20		75
Methylene chloride	ppm	50			50		
Mica	mg/m³	2.5			2.5		
Molybdenum, soluble compounds (as Mo)	mg/m³	5			0.5		
n-Butyl alcohol	ppm		50		20		
n-Heptane	ppm	400		500	400		500
n-Hexane	ppm	20			50		
Nickel (metal)	mg/m³	1			0.1		
Nickel (soluble compounds, as Ni)	mg/m³	0.1			0.1		
Nickel sulphide (fume or dust, as Ni)	mg/m³	1			0.1		
Nitric acid	ppm	2		4	2		
Nitric oxide	ppm	25			2		
Nitrogen dioxide	ppm	3		5	3		5
n-Propyl alcohol	ppm	200		250	200		250

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Octane	ppm	300		375	300		375
Oil mist (refined mineral oils)	mg/m³	5			5		
Perchloroethylene	ppm	50		150	20		40
Polycyclic aromatic hydrocarbons (PAH)	mg/m³	0.2					
Respirable dust	mg/m³	3			3		
sec-Butyl alcohol	ppm	100			100		
Selenium	mg/m³	0.1			0.1		
Silica, amorphous	mg/m³	2			2		
Silica, crystalline (quartz)	mg/m³	0.05			0.05		
Silver (metal)	mg/m³	0.1			0.1		
Soapstone (inhalable)	mg/m³	6			6		
Soapstone (respirable)	mg/m³	3			3		
Sodium hydroxide	mg/m³		2			2	
Styrene (monomer)	ppm	50		100	20		40
Sulphur dioxide	ppm	2		5			0.25
Sulphuric acid	mg/m³	1		3	0.1		
Synthetic mineral fibres (SMF, as dust)	mg/m³	2			2		
Synthetic mineral fibres (SMF, as fibrous)	f/mL	0.5			0.5		
Talc (fibrous)	f/mL	0.1			0.1		
Talc (non-fibrous)	mg/m³	2.5			2		
Tantalum	mg/m³	5			5		
Tellurium	mg/m³	0.1			0.1		
Thallium (soluble compounds, as Tl)	mg/m³	0.1			0.02		
Tin (metal)	mg/m³	2			2		
Tin (oxide or inorganic compounds, as Sn)	mg/m³	2			2		
Titanium dioxide	mg/m³	10			10		
Toluene	ppm	50		150	20		
Total dust	mg/m³	10			10		

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Total petroleum hydrocarbons (TPH)	mg/m³	480			480		
Trichloroethylene	ppm	10		40	10		40
Tungsten	mg/m³	1		10	3		
Vanadium (as V2O5)	mg/m³	0.05			0.05		
Welding fumes	mg/m³	1			1		
Wood dust (hardwoods)	mg/m³	1			1		
Wood dust (soft woods)	mg/m³	5		10	2		
Xylene	ppm	80		150	80		150
Zinc oxide (dust)	mg/m³	10			2		10
Zinc oxide (fume)	mg/m³	5		10	2		10
Zirconium compounds (as Zr)	mg/m³	5		10	5		10