

# Table 1: List of approved workplace exposure limits (as consolidated with amendments October 2007)

This list is legally binding, as it reproduces the list of workplace exposure limits (WELs) which have been approved by the Health and Safety Commission. The limits are given in ppm and  $\text{mg.m}^{-3}$ . The conversion method is given on page 42. The Control of Substances Hazardous to Health Regulations 2002 impose requirements by reference to this list.

However, the entries in the columns headed 'CAS number', and 'Comments' are not part of the approved list of WELs. The workplace exposure limits of the dusts included in the list below refer to the inhalable dust fraction, unless otherwise stated.

**Table 1:** List of approved workplace exposure limits

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Acetaldehyde	75-07-0	20	37	50	92	R12, 36/37, 40
Acetic anhydride	108-24-7	0.5	2.5	2	10	R10, 20/22, 34
Acetone	67-64-1	500	1210	1500	3620	R11 36, 66, 67
Acetonitrile	75-05-8	40	68	60	102	R11, 20/21/22, 36
o-Acetylsalicylic acid	50-78-2	-	5	-	-	
Acrylaldehyde (Acrolein)	107-02-8	0.1	0.23	0.3	0.7	R11 24/25, 26, 34, 50
Acrylamide	79-06-1	-	0.3	-	-	Carc Sk R45, 46, 20/21, 25, 36/38, 43, 48/23/24/25, 62
Acrylonitrile	107-13-1	2	4.4	-	-	Carc Sk R45, 11, 23/24/25, 37/38, 41, 43, 51/53
Allyl alcohol	107-18-6	2	4.8	4	9.7	Sk R10, 23/24/25, 36/37/38, 50
Aluminium alkyl compounds		-	2	-	-	R14, 17, 34
Aluminium metal	7429-90-5					
inhalable dust		-	10	-	-	
respirable dust		-	4	-	-	
Aluminium oxides	1344-28-1					
inhalable dust		-	10	-	-	
respirable dust		-	4	-	-	
Aluminium salts, soluble		-	2	-	-	
2-Aminoethanol	141-43-5	1	2.5	3	7.6	Sk R20/21/22, 34
Ammonia, anhydrous	7664-41-7	25	18	35	25	R10, 23, 34, 50
Ammonium chloride, fume	12125-02-9	-	10	-	20	R22, 36
Ammonium sulphamidate	7773-06-0	-	10	-	20	
Aniline	62-53-3	1	4	-	-	Sk R23/24/25, 40, 41, 48/23/24/25, 68, 50
Antimony and compounds except stibine (as Sb)		-	0.5	-	-	
<i>p</i> -Aramid respirable fibres	26125-61-1		0.5 fibres/ml	-	-	
Arsenic and arsenic compounds except arsine (as As)		-	0.1	-	-	Carc
Arsine	7784-42-1	0.05	0.16	-	-	R12, 26, 48/20, 50/53
Asphalt, petroleum fumes	8052-42-4	-	5	-	10	

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Azodicarbonamide	123-77-3	-	1.0	-	3.0	Sen R42, 44
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Barium compounds, soluble (as Ba)		-	0.5	-	-	
Barium sulphate	7727-43-7					
inhalable dust		-	10	-	-	
respirable dust		-	4	-	-	
Benzene	71-43-2	1	3.25	-	-	Carc Sk R45, 46, 11, 36/38, 48/23/24/25, 65
Benzyl butyl phthalate	85-68-7	-	5	-	-	R61, 62, 50/53
Benzyl chloride	100-44-7	0.5	2.6	1.5	7.9	Carc R45, 22, 23, 37/38, 41, 48/22
Beryllium and beryllium compounds (as Be)		-	0.002	-	-	Carc
Bis(2-ethylhexyl) phthalate	117-81-7	-	5	-	10	R60, 61
Bis(chloromethyl) ether	542-88-1	0.001	0.005	-	-	Carc R45, 10, 22, 24, 26
Bornan-2-one	76-22-2	2	13	3	19	
Boron tribromide	10294-33-4	-	-	1	10	R14, 26/28, 35
Bromacil (ISO)	314-40-9	1	11	2	22	
Bromine	7726-95-6	0.1	0.66	0.2	1.3	R26, 35, 50
Bromomethane	74-83-9	5	20	15	59	Sk R23/25, 36/37/38, 48/20, 68, 50, 59
Butane	106-97-8	600	1450	750	1810	Carc (only applies if Butane contains more than 0.1% of buta-1, 3-diene) R12
Buta-1,3-diene	106-99-0	10	22	-	-	Carc R45, 46, 12
Butan-1-ol	71-36-3	-	-	50	154	Sk R10, 22, 37/38, 41, 67
Butan-2-ol	78-92-2	100	308	150	462	R10, 36/37, 67
Butan-2-one (methyl ethyl ketone)	78-93-3	200	600	300	899	Sk BMGV R11, 36, 66, 67
2-Butoxyethanol	111-76-2	25	123	50	246	Sk BMGV R20/21/22, 36/38

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
2-(2-Butoxyethoxy) ethanol	112-34-5	10	67.5	15	101.2	R36
2-Butoxyethyl acetate	112-07-2	20	133	50	332	Sk R20/21
<i>n</i> -Butyl acrylate	141-32-2	1	5	5	26	R10, 36/37/38, 43
<i>n</i> -Butyl chloroformate	592-34-7	1	5.7	-	-	R10, 23, 34
<i>sec</i> -Butyl acetate	105-46-4	200	966	250	1210	R11, 66
<i>tert</i> -Butyl acetate	540-88-5	200	966	250	1210	R11, 66
Butyl acetate	123-86-4	150	724	200	966	R10, 66, 67
Butyl lactate	138-22-7	5	30	-	-	
2- <i>sec</i> -Butylphenol	89-72-5	5	31	-	-	Sk
Cadmium & cadmium compounds except cadmium oxide fume, cadmium sulphide & cadmium sulphide pigments (as Cd)		-	0.025	-	-	Carc (cadmium metal, cadmium chloride, fluoride and sulphate)
Cadmium oxide fume (as Cd)	1306-19-0	-	0.025	-	0.05	Carc R45, 26, 48/23/25, 62, 63, 68, 50/53
Cadmium sulphide and cadmium sulphide pigments (respirable dust (as Cd))		-	0.03	-	-	Carc (cadmium sulphide)
Caesium hydroxide	21351-79-1	-	2	-	-	
Calcium carbonate inhalable dust	1317-65-3	-	10	-	-	
respirable		-	4	-	-	
Calcium cyanamide	156-62-7	-	0.5	-	1	R22, 37, 41
Calcium hydroxide	1305-62-0	-	5	-	-	
Calcium oxide	1305-78-8	-	2	-	-	
Calcium silicate inhalable dust	1344-95-2	-	10	-	-	
respirable		-	4	-	-	
Captan (ISO)	133-06-2	-	5	-	15	R23, 40, 41, 43, 50
Carbon black	1333-86-4	-	3.5	-	7	
Carbon dioxide	124-38-9	5000	9150	15000	27400	
Carbon disulphide	75-15-0	10	32	-	-	Sk R11, 36/38, 48/23, 62, 63
Carbon monoxide	630-08-0	30	35	200	232	Bmgv R12, 23, 48/23, 61
Carbon tetrachloride	56-23-5	2	13	-	-	Sk R23/24/25, 40, 48/23, 52/53, 59

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Cellulose	9004-34-6					
inhalable dust		-	10	-	20	
respirable		-	4	-	-	
Chlorine	7782-50-5	-	-	0.5	1.5	R23, 36/37/38, 50
Chlorine dioxide	10049-04-4	0.1	0.28	0.3	0.84	R6, 8, 26, 34, 50
Chloroacetaldehyde	107-20-0	-	-	1	3.3	R24/25, 26, 34, 40, 50
2-Chloroacetophenone	532-27-4	0.05	0.32	-	-	
Chlorobenzene	108-90-7	1	4.7	3	14	Sk R10, 20, 51/53
Chlorodifluoromethane	75-45-6	1000	3590	-	-	
Chloroethane	75-00-3	50	134	-	-	R12, 40, 52/53
2-Chloroethanol	107-07-3	-	-	1	3.4	Sk R26/27/28
1-Chloro-2,3-epoxypropane (Epichlorohydrin)	106-89-8	0.5	1.9	1.5	5.8	Carc R45, 10, 23/24/25, 34, 43
Chloroform	67-66-3	2	9.9	-	-	Sk R22, 38, 40, 48/20/22
Chloromethane	74-87-3	50	105	100	210	R12, 40, 48/20
1-Chloro-4-nitrobenzene	100-00-5	-	1	-	2	Sk R23/24/25, 40, 48/20/21/22, 68, 51/53
Chlorosulphonic acid	7790-94-5	-	1	-	-	R14, 35, 37
Chlorpyrifos (ISO)	2921-88-2	-	0.2	-	0.6	Sk R25, 50/53
Chromium	7440-47-3	-	0.5	-	-	
Chromium (II) compounds (as Cr)		-	0.5	-	-	
Chromium (III) compounds (as Cr)		-	0.5	-	-	
Chromium (VI) compounds (as Cr)		-	0.05	-	-	Carc, Sen BMGV
Cobalt and cobalt compounds (as Co)		-	0.1	-	-	Carc (cobalt dichloride and sulphate) Sen
Copper	7440-50-8					
fume		-	0.2	-	-	
dusts and mists (as Cu)		-	1	-	2	
Cotton dust	See page 29	-	2.5	-	-	
Cryofluorane (INN)	76-14-2	1000	7110	1250	8890	
Cumene	98-82-8	25	125	50	250	Sk R10, 37, 65, 51/53
Cyanamide	420-04-2	0.58	1	-	-	Sk R21, 25, 36/38, 43
Cyanides, except HCN, cyanogen and cyanogen chloride (as CN)		-	5	-	-	Sk
Cyanogen chloride	506-77-4	-	-	0.3	0.77	
Cyclohexane	110-82-7	100	350	300	1050	R11, 38, 65, 67, 50/53

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		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Cyclohexanol	108-93-0	50	208	-	-	R20/22, 37/38
Cyclohexanone	108-94-1	10	41	20	82	Sk BMGV R10, 20
Cyclohexylamine	108-91-8	10	41	-	-	R10, 21/22, 34
2,4-D (ISO)	94-75-7	-	10	-	20	R22, 37, 41, 43, 52/53
Dialkyl 79 phthalate	83968-18-7	-	5	-	-	
Diallyl phthalate	131-17-9	-	5	-	-	R22, 50/53
Diatomaceous earth, natural, respirable dust	61790-53-2	-	1.2	-	-	
Dibenzoyl peroxide	94-36-0	-	5	-	-	R2, 36, 43
Dibismuth tritelluride	1304-82-1	-	10	-	20	
Diboron trioxide	1303-86-2	-	10	-	20	
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.5	3.9	-	-	Carc, Sk R45, 23/24/25, 36/37/38, 51/53
Dibutyl hydrogen phosphate	107-66-4	1	8.7	2	17	
Dibutyl phthalate	84-74-2	-	5	-	10	R61, 62, 50
Dichloroacetylene	7572-29-4	-	-	0.1	0.39	R2, 40, 48/20
1,2-Dichlorobenzene ( <i>ortho</i> -dichlorobenzene)	95-50-1	25	153	50	306	Sk R22, 36/37/38, 50/53*
1,4-Dichlorobenzene ( <i>para</i> -dichlorobenzene)	106-46-7	25	153	50	306	R36, 40, 50/53
1,3-Dichloro-5,5-dimethyl-hydantoin	118-52-5	-	0.2	-	0.4	
1,1-Dichloroethane	75-34-3	100	-	-	-	Sk R11, 22, 36/37, 52/53*
1,2-Dichloroethane (Ethylene dichloride)	107-06-2	5	21	-	-	Carc, Sk R45, 11, 22, 36/37/38
1,2-Dichloroethylene, cis:trans isomers 60:40	540-59-0	200	806	250	1010	R11, 20, 52/53
Dichlorofluoromethane	75-43-4	10	43	-	-	
Dichloromethane	75-09-2	100	350	300	1060	Bmgv Sk R40
2,2'-Dichloro-4,4'-methylene dianiline (MbOCA)	101-14-4	-	0.005	-	-	Carc Sk Bmgv R45, 22, 50/53
Dicyclohexyl phthalate	84-61-7	-	5	-	-	
Dicyclopentadiene	77-73-6	5	27	-	-	R11, 20/22, 36/37/38 51/53
Diethylamine	109-89-7	5	15	10	30	R11, 20/21/22, 35

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Diethyl ether	60-29-7	100	310	200	620	R12, 19, 22, 66, 67
Diethyl phthalate	84-66-2	-	5	-	10	
Diethyl sulphate	64-67-5	0.05	0.32	-	-	Carc Sk R45, 46, 20/21/22, 34
Dihydrogen selenide (as Se)	7783-07-5	0.02	0.07	0.05	0.17	R23/25, 33
Diisobutyl phthalate	84-69-5	-	5	-	-	
Diisodecyl phthalate	26761-40-0	-	5	-	-	
Diisononyl phthalate	28553-12-0	-	5	-	-	
Diisooctyl phthalate	27554-26-3	-	5	-	-	
Diisopropylamine	108-18-9	5	21	-	-	R11, 20/22, 34
Diisopropyl ether	108-20-3	250	1060	310	1310	R11, 19, 66, 67
N,N-Dimethylacetamide	127-19-5	10	36	20	72	Sk BMGV R20/21, 61
N,N-Dimethylaniline	121-69-7	5	25	10	50	Sk R23/24/25, 40, 51/53
N,N-Dimethylethylamine	598-56-1	10	30	15	46	R12, 20/22, 34
Dimethoxymethane	109-87-5	1000	3160	1250	3950	
Dimethylamine	124-40-3	2	3.8	6	11	R12, 20, 37/38, 41
2-Dimethylaminoethanol	108-01-0	2	7.4	6	22	R10, 20/21/22, 34
Dimethyl ether	115-10-6	400	766	500	958	R12
Dimethylformamide	68-12-2	10	30	20	61	Sk R61, 20/21, 36
2,6-Dimethylheptan-4-one	108-83-8	25	148	-	-	R10, 37
Dimethyl phthalate	131-11-3	-	5	-	10	
Dimethyl sulphate	77-78-1	0.05	0.26	-	-	Carc Sk R45, 25, 26, 34, 43, 68
Dinitrobenzene, all isomers	25154-54-5	0.15	1	0.5	3.5	Sk R26/27/28, 33, 50, 53
Dinonyl phthalate	84-76-4	-	5	-	-	
1,4-Dioxane	123-91-1	25	91	100	366	Sk R11, 19, 36/37, 40, 66
Diphenylamine	122-39-4	-	10	-	20	R23/24/25, 33, 50/53
Diphenyl ether (vapour)	101-84-8	1	7.1	-	-	
Diphosphorus pentasulphide	1314-80-3	-	1	-	2	R11, 20/22, 29, 50
Diphosphorus pentoxide	1314-56-3	-	1	-	2	R35
Diquat dibromide (ISO)	85-00-7	-	0.5	-	1	R22, 26, 36/37/38, 43, 48/25, 50/53
Disodium disulphite	7681-57-4	-	5	-	-	R22, 31, 41
Disodium tetraborate, anhydrous	1330-43-4	-	1	-	-	
Disodium tetraborate, decahydrate	1330-96-4	-	5	-	-	

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Disodium tetraborate, pentahydrate	11130-12-4	-	1	-	-	
Disulphur dichloride	10025-67-9	-	-	1	5.6	R14, 20, 25, 29, 35, 50
2,6-Di- <i>tert</i> -butyl- <i>p</i> -cresol	128-37-0	-	10	-	-	
6,6'-Di- <i>tert</i> -butyl-4,4'-thiodi- <i>m</i> -cresol	96-69-5	-	10	-	20	
Diuron (ISO)	330-54-1	-	10	-	-	R22, 40, 48/22, 50/53
<b>Emery</b>						
Emery inhalable dust	1302-74-5	-	10	-	-	
Emery respirable		-	4	-	-	
Endosulfan (ISO)	115-29-7	-	0.1	-	0.3	Sk R24/25, 36, 50/53
Enflurane	13838-16-9	50	383	-	-	
Ethane-1,2-diol particulate	107-21-1	-	10	-	-	Sk R22
Ethane-1,2-diol vapour		20	52	40	104	
Ethanethiol	75-08-1	0.5	1.3	2	5.2	R11, 20, 50/53
Ethanol	64-17-5	1000	1920	-	-	R11
2-Ethoxyethanol	110-80-5	10	37	-	-	Sk R10, 20/21/22, 60, 61
2-Ethoxyethyl acetate	111-15-9	10	55	-	-	Sk R20/21/22, 60, 61
2-Ethylhexyl chloroformate	24468-13-1	1	8	-	-	-
Ethyl acetate	141-78-6	200	-	400	-	R11, 36, 66, 67
Ethyl acrylate	140-88-5	5	21	15	62	R11, 20/21/22, 36/37/38, 43
Ethylamine	75-04-7	2	3.8	6	11	R12, 36/37
Ethylbenzene	100-41-4	100	441	125	552	Sk R11, 20
Ethyl chloroformate	541-41-3	1	4.5	-	-	R11, 22, 26, 34
Ethyl cyanoacrylate	7085-85-0	-	-	0.3	1.5	R36/37/38
Ethyl formate	109-94-4	100	308	150	462	R11, 20/22, 36/37
Ethylene oxide	75-21-8	5	9.2	-	-	Carc R45, 46, 12, 23, 36/37/38
4-Ethylmorpholine	100-74-3	5	24	20	96	Sk
<b>Ferrous foundry particulate</b>						
Ferrous foundry particulate inhalable dust	See page 29	-	10	-	-	
Ferrous foundry particulate respirable dust		-	4	-	-	
Flour dust	See page 30	-	10	-	30	Sen



Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Fluoride (inorganic as F)	16984-48-8	-	2.5	-	-	
Fluorine	7782-41-4	1	1.6	1	1.6	R7, 26, 35
Formaldehyde	50-00-0	2	2.5	2	2.5	R23/24/25, 34, 40, 43
Formamide	75-12-7	20	37	30	56	R61
Formic acid	64-18-6	5	9.6	-	-	R35
2-Furaldehyde (furfural)	98-01-1	2	8	5	20	Sk R21, 23/25, 36/37, 40
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Germane	7782-65-2	0.2	0.64	0.6	1.9	
Glutaraldehyde	111-30-8	0.05	0.2	0.05	0.2	Sen R23/25,34,42/43,50
Glycerol, mist	56-81-5	-	10	-	-	
Grain dust	See page 30	-	10	-	-	Sen
Graphite	7440-44-0					
inhalable dust		-	10	-	-	
respirable		-	4	-	-	
Gypsum	10101-41-4					
inhalable dust		-	10	-	-	
respirable		-	4	-	-	
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Halogeno-platinum compounds (complex co-ordination compounds in which the platinum atom is directly co-ordinated to halide groups) (as Pt)	See page 30	-	0.002	-	-	Sen
Halothane	151-67-7	10	82	-	-	
Hardwood dust	See page 31	-	5	-	-	Carc Sen
<i>n</i> -Heptane	142-82-5	500	2085	-	-	R11, 38, 65, 67, 50/53
Heptan-2-one	110-43-0	50	237	100	475	Sk R10, 20/22
Heptan-3-one	106-35-4	35	166	100	475	Sk R10, 20, 36
<i>n</i> -Hexane	110-54-3	20	72	-	-	R11, 38, 48/20, 62, 65, 67, 51/53*
1,6-Hexanolactam	105-60-2					R20/22, 36/37/38
dust only		-	1	-	3	
dust and vapour		-	10	-	20	
Hexan-2-one	591-78-6	5	21	-	-	Sk R10, 48/23, 62, 67

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		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Hydrazine	302-01-2	0.02	0.03	0.1	0.13	Carc Sk R45, 10, 23/24/25, 34, 43, 50/53
Hydrogen bromide	10035-10-6	-	-	3	10	R35, 37
Hydrogen chloride (gas and aerosol mists)	7647-01-0	1	2	5	8	R23, 35
Hydrogen cyanide	74-90-8	-	-	10	11	Sk R12, 26, 50/53
Hydrogen fluoride (as F)	7664-39-3	1.8	1.5	3	2.5	R26/27/28, 35
Hydrogen peroxide	7722-84-1	1	1.4	2	2.8	R5, 8, 20/22, 35
Hydrogen sulphide	7783-06-4	5	7	10	14	R12, 26, 50
Hydroquinone	123-31-9	-	0.5	-	-	R22, 40, 41, 43, 68, 50
4-Hydroxy-4-methylpentan-2-one	123-42-2	50	241	75	362	R36
2-Hydroxypropyl acrylate	999-61-1	0.5	2.7	-	-	Sk R23/24/25, 34, 43
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2,2'-Iminodi(ethylamine)	111-40-0	1	4.3	-	-	Sk R21/22, 34, 43
Indene	95-13-6	10	48	15	72	
Indium and compounds (as In)		-	0.1	-	0.3	
Iodine	7553-56-2	-	-	0.1	1.1	R20/21, 50
Iodoform	75-47-8	0.6	9.8	1	16	
Iodomethane	74-88-4	2	12	-	-	Sk R21, 23/25, 37/38, 40
Iron oxide, fume (as Fe)	1309-37-1	-	5	-	10	
Iron salts (as Fe)		-	1	-	2	
Isobutyl acetate	110-19-0	150	724	187	903	R11, 66
Isocyanates, all (as -NCO)		-	0.02	-	0.07	Sen
Isoflurane	26675-46-7	50	383	-	-	
Isooctyl alcohol (mixed isomers)	26952-21-6	50	271	-	-	
Isopentane	78-78-4	600	1800	-	-	R12, 51/53, 65, 66, 67
Isopropyl acetate	108-21-4	-	-	200	849	R11, 36, 66, 67
Isopropyl chloroformate	108-23-6	1	5.1	-	-	
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Kaolin, respirable dust	1332-58-7	-	2	-	-	
Ketene	463-51-4	0.5	0.87	1.5	2.6	
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Limestone total inhalable	1317-65-3	-	10	-	-	
respirable		-	4	-	-	

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Liquefied petroleum gas	68476-85-7	1000	1750	1250	2180	Carc (only applies if LPG contains more than 0.1% of buta-1, 3-diene) R12
Lithium hydride	7580-67-8	-	0.025	-	-	
Lithium hydroxide	1310-65-2	-	-	-	1	
Magnesite	546-93-0					
inhalable dust		-	10	-	-	
respirable dust		-	4	-	-	
Magnesium oxide (as Mg)	1309-48-4					
inhalable dust		-	10	-	-	
fume and respirable dust		-	4	-	-	
Malathion (ISO)	121-75-5	-	10	-	-	Sk R22, 50/53
Maleic anhydride	108-31-6	-	1	-	3	Sen R22, 34, 42/43
Manganese and its inorganic compounds (as Mn)		-	0.5	-	-	
Marble	1317-65-3					
total inhalable		-	10	-	-	
respirable		-	4	-	-	
Mercaptoacetic acid	68-11-1	1	3.8	-	-	R23/24/25, 34
Methacrylic acid	79-41-4	20	72	40	143	R21/22, 35
Methacrylonitrile	126-98-7	1	2.8	-	-	Sk R11, 23/24/25, 43
Methanethiol	74-93-1	0.5	1.0	-	-	R12, 23, 50/53
Methanol	67-56-1	200	266	250	333	Sk R11, 23/24/25, 39/23/24/25
2-Methoxyethanol	109-86-4	5	16	-	-	Sk R10, 20/21/22, 60, 61
2-(2-Methoxyethoxy) ethanol	111-77-3	10	50.1	-	-	Sk R63
2-Methoxyethyl acetate	110-49-6	5	25	-	-	Sk R20/21/22, 60, 61
(2-methoxymethylethoxy) propanol	34590-94-8	50	308	-	-	Sk
1-Methoxypropan-2-ol	107-98-2	100	375	150	560	Sk R10
1-Methoxypropyl acetate	108-65-6	50	274	100	548	Sk R10, 36
Methyl acetate	79-20-9	200	616	250	770	R11, 36, 66, 67
3-Methylbutan-1-ol	123-51-3	100	366	125	458	
Methyl cyanoacrylate	137-05-3	-	-	0.3	1.4	R36/37/38
4,4'-Methylenedianiline	101-77-9	0.01	0.08	-	-	Carc Sk Bmgv R45, 39/23/24/25, 43, 48/20/21/22, 68, 51/53

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Methyl ethyl ketone peroxides (MEKP)	1338-23-4	-	-	0.2	1.5	
Methyl methacrylate	80-62-6	50	208	100	416	R11, 37/38, 43
2-Methylcyclohexanone	583-60-8	50	233	75	350	R10, 20
Methylcyclohexanol	25639-42-3	50	237	75	356	
N-Methylaniline	100-61-8	0.5	2.2	-	-	Sk R23/24/25, 33, 50/53
5-Methylheptan-3-one	541-85-5	10	53	20	107	R10, 36/37
5-Methylhexan-2-one	110-12-3	20	95	100	475	Sk R10, 20
2-Methylpentane-2,4-diol	107-41-5	25	123	25	123	R36/38
4-Methylpentan-2-ol	108-11-2	25	106	40	170	Sk R10, 37
4-Methylpentan-2-one	108-10-1	50	208	100	416	Sk Bmgv R11, 20, 36/37, 66
2-Methylpropan-1-ol	78-83-1	50	154	75	231	R10, 37/38, 41, 67
2-Methylpropan-2-ol	75-65-0	100	308	150	462	R20
1-Methyl-2-pyrrolidone	872-50-4	25	103	75	309	Sk R36/38
Methyl- <i>tert</i> -butyl ether	1634-04-4	25	92	75	275	R11, 38
Mica	12001-26-2					
total inhalable		-	10	-	-	
respirable		-	0.8	-	-	
MMMF (Machine-made mineral fibre) (except for Refractory Ceramic Fibres and Special Purpose Fibres)		5 mg.m <sup>-3</sup> and 2 fibres/millilitre		-	-	
Molybdenum compounds (as Mo)						
soluble compounds		-	5	-	10	
insoluble compounds		-	10	-	20	
Monochloroacetic acid	79-11-8	0.3	1.2	-	-	Sk R25, 34, 50
Morpholine	110-91-8	10	36	20	72	Sk R10, 20/21/22, 34
Neopentane	463-82-1	600	1800	-	-	R12, 51/53
Nickel and its inorganic compounds (except nickel tetracarbonyl):						Sk Carc (nickel oxides and sulphides) Sen (nickel sulphate)
water-soluble nickel compounds (as Ni)		-	0.1	-	-	
nickel and water-insoluble nickel compounds (as Ni)		-	0.5	-	-	
Nicotine	54-11-5	-	0.5	-	1.5	Sk R25, 27, 51/53

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Nitric acid	7697-37-2	-	-	1	2.6	R8, 35
Nitrobenzene	98-95-3	0.2	1	-	-	Sk R23/24/25, 40, 48/23/24, 62, 51/53
Nitromethane	75-52-5	100	254	150	381	R5, 10, 22
2-Nitropropane	79-46-9	5	19	-	-	Carc R45, 10, 20/22
Nitrous oxide	10024-97-2	100	183	-	-	
Orthophosphoric acid	7664-38-2	-	1	-	2	R34
Osmium tetroxide (as Os)	20816-12-0	0.0002	0.002	0.0006	0.006	R26/27/28, 34
Oxalic acid	144-62-7	-	1	-	2	R21/22
2,2'-Oxydiethanol	111-46-6	23	101	-	-	R22
Ozone	10028-15-6	-	-	0.2	0.4	
Paracetamol, inhalable dust	103-90-2	-	10	-	-	
Paraffin wax, fume	8002-74-2	-	2	-	6	
Paraquat dichloride (ISO), respirable dust	1910-42-5	-	0.08	-	-	R24/25, 26, 36/37/38, 48/25, 50/53
Pentacarbonyliron (as Fe)	13463-40-6	0.01	0.08	-	-	
Pentaerythritol inhalable dust	115-77-5	-	10	-	20	
Pentaerythritol respirable dust		-	4	-	-	
Pentan-2-one	107-87-9	200	716	250	895	
Pentan-3-one	96-22-0	200	716	250	895	R11, 37, 66, 67
Pentane	109-66-0	600	1800	-	-	R12, 51/53, 65, 66, 67
Pentyl acetates (all isomers)		50	270	100	541	R10, 66
2-Phenylpropene	98-83-9	50	246	100	491	R10, 36/37, 51/53
Phenol	108-95-2	2	7.8	-	-	Sk R23/24/25, 34, 48/20/21/22, 68
<i>p</i> -Phenylenediamine	106-50-3	-	0.1	-	-	Sk R23/24/25, 36, 43, 50/53
Phorate (ISO)	298-02-2	-	0.05	-	0.2	Sk R27/28, 50/53
Phosgene	75-44-5	0.02	0.08	0.06	0.25	R26, 34
Phosphine	7803-51-2	0.1	0.14	0.2	0.28	R12, 17, 26, 34, 50
Phosphorus pentachloride	10026-13-8	0.1	0.87	0.2	2	R14, 22, 26, 34, 48/20
Phosphorus trichloride	7719-12-2	0.2	1.1	0.5	2.9	R14, 26/28, 35, 48/20
Phosphorus, yellow	7723-14-0	-	0.1	-	0.3	R11, 16, 52/53
Phosphoryl trichloride	10025-87-3	0.2	1.3	0.6	3.8	R14, 22, 26, 35, 48/23

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Phthalic anhydride	85-44-9	-	4	-	12	Sen R22, 37/38, 41, 42/43
Picloram (ISO)	1918-02-1	-	10	-	20	
Picric acid	88-89-1	-	0.1	-	0.3	R2, 4, 23/24/25
Piperazine	110-85-0	-	0.1	-	0.3	Sen R34, 42/43, 52/53
Piperazine dihydrochloride	142-64-3	-	0.1	-	0.3	Sen
Piperidine	110-89-4	1	3.5	-	-	Sk R11, 23/24, 34
Plaster of Paris inhalable dust	26499-65-0	-	10	-	-	
respirable dust		-	4	-	-	
Platinum compds, soluble (except certain halogeno- Pt compounds) (as Pt)		-	0.002	-	-	
Platinum metal	7440-06-4	-	5	-	-	
Polychlorinated biphenyls (PCB)	1336-36-3	-	0.1	-	-	Sk R33, 50/53
Polyvinyl chloride inhalable dust	9002-86-2	-	10	-	-	
respirable dust		-	4	-	-	
Portland cement inhalable dust	65997-15-1	-	10	-	-	
respirable dust		-	4	-	-	
Potassium hydroxide	1310-58-3	-	-	-	2	R22, 35
Propane-1,2-diol total vapour and particulates	57-55-6	150	474	-	-	
particulates		-	10	-	-	
Propan-1-ol	71-23-8	200	500	250	625	Sk R11, 41, 67
Propan-2-ol	67-63-0	400	999	500	1250	R11, 36, 67
Propionic acid	79-09-4	10	31	15	46	R34
Propoxur (ISO)	114-26-1	-	0.5	-	2	R25, 50/53
Propranolol	525-66-6	-	2	-	6	
<i>n</i> -Propyl acetate	109-60-4	200	849	250	1060	R11, 36, 66, 67
Propylene oxide	75-56-9	5	12	-	-	Carc R45, 46, 12, 20/21/22, 36/37/38
Prop-2-yn-1-ol	107-19-7	1	2.3	3	7	Sk R10, 23/24/25, 34, 51/53
Pulverised fuel ash inhalable dust		-	10	-	-	
respirable dust		-	4	-	-	
Pyrethrum (purified of sensitising lactones)	8003-34-7	-	1	-	-	

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Pyridine	110-86-1	5	16	10	33	R11, 20/21/22
2-Pyridylamine	504-29-0	0.5	2	2	7.8	
Pyrocatechol	120-80-9	5	23	-	-	R21/22, 36/38
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Refractory Ceramic Fibres and Special Purpose Fibres		5 mg.m <sup>-3</sup> 1 fibre/millilitre		-	-	Carc R49, 38
Resorcinol	108-46-3	10	46	20	92	Sk R22, 36/38, 50
Rhodium (as Rh) metal fume and dust		-	0.1	-	0.3	
soluble salts		-	0.001	-	0.003	
Rosin-based solder flux fume	8050-09-7	-	0.05	-	0.15	Sen
Rotenone (ISO)	83-79-4	-	5	-	10	R25, 36/37/38, 50/53
Rouge	1309-37-1					
total inhalable		-	10	-	-	
respirable		-	4	-	-	
Rubber fume	See page 30	-	0.6	-	-	Carc Limit relates to cyclohexane soluble material
Rubber process dust	See page 30	-	6	-	-	Carc
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Selenium and compounds, except hydrogen selenide (as Se)		-	0.1	-	-	
Silane	7803-62-5	0.5	0.67	1	1.3	
Silica, amorphous						
inhalable dust		-	6	-	-	
respirable dust		-	2.4	-	-	
Silica, respirable crystalline	see page 31	-	0.1	-	-	HSC/E plans to keep this limit under review
Silica, fused respirable dust	60676-86-0	-	0.08	-	-	
Silicon	7440-21-3					
inhalable dust		-	10	-	-	
respirable dust		-	4	-	-	
Silicon carbide (not whiskers)	409-21-2					
total inhalable		-	10	-	-	
respirable		-	4	-	-	
Silver (soluble compounds as Ag)		-	0.01	-	-	

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Silver, metallic	7440-22-4	-	0.1	-	-	
Sodium azide (as NaN <sub>3</sub> )	26628-22-8	-	0.1	-	0.3	Sk R28, 32, 50/53
Sodium 2- (2,4-dichlorophenoxy) ethyl sulphate	136-78-7	-	10	-	20	
Sodium hydrogen sulphite	7631-90-5	-	5	-	-	R22, 31
Sodium hydroxide	1310-73-2	-	-	-	2	R35
Softwood dust	See page 31	-	5	-	-	Sen
Starch	9005-25-8					
total inhalable		-	10	-	-	
respirable		-	4	-	-	
Styrene	100-42-5	100	430	250	1080	R10, 20, 36/38
Subtilisins	1395-21-7 ( <i>Bacillus subtilis</i> BPN) 9014-01-1 ( <i>Bacillus subtilis</i> Carlsberg)	-	0.00004	-	-	Sen R37/38, 41, 42
Sucrose	57-50-1	-	10	-	20	
Sulfotep (ISO)	3689-24-5	-	0.1	-	-	Sk R27/28, 50/53
Sulphur hexafluoride	2551-62-4	1000	6070	1250	7590	
Sulphuryl difluoride	2699-79-8	5	21	10	42	R23, 48/20, 50
Talc, respirable dust	14807-96-6	-	1	-	-	
Tantalum	7440-25-7	-	5	-	10	
Tellurium & compounds, except hydrogen telluride, (as Te)		-	0.1	-	-	
Terphenyls, all isomers	26140-60-3	-	-	0.5	4.8	
1,1,2,2-Tetrabromoethane	79-27-6	0.5	7.2	-	-	Sk R26, 36, 52/53
Tetracarbonylnickel (as Ni)	13463-39-3	-	-	0.1	0.24	R11, 26, 40, 61, 50/53
Tetrachloroethylene	127-18-4	50	345	100	689	R40, 50/53
1,1,1,2-Tetrafluoroethane (HFC 134a)	811-97-2	1000	4240	-	-	
Tetrahydrofuran	109-99-9	50	150	100	300	Sk R11, 19, 36/37
Tetrasodium pyrophosphate	7722-88-5	-	5	-	-	



Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Thallium, soluble compounds (as Tl)		-	0.1	-	-	Sk
Thionyl chloride	7719-09-7	-	-	1	4.9	R14, 20/22, 29, 35
Tin compounds, inorganic, except SnH <sub>4</sub> , (as Sn)		-	2	-	4	
Tin compounds, organic, except Cyhexatin (ISO), (as Sn)		-	0.1	-	0.2	Sk
Titanium dioxide	13463-67-7					
total inhalable		-	10	-	-	
respirable		-	4	-	-	
Toluene	108-88-3	50	191	100	384	Sk R11, 38, 48/20, 63, 65, 67
<i>p</i> -Toluenesulphonyl chloride	98-59-9	-	-	-	5	
<i>o</i> -Toluidine	95-53-4	0.2	0.89	-	-	Carc Sk R45, 23/25, 36, 50
Tributyl phosphate, all isomers	126-73-8	-	5	-	5	R22, 38, 40
1,2,4-Trichlorobenzene	120-82-1	1	-	5	-	Sk R22, 38, 50/53
1,1,1-Trichloroethane	71-55-6	100	555	200	1110	R20, 59
Trichloroethylene	79-01-6	100	550	150	820	Carc, Sk R45, 36/38, 67, 52/53
Trichloronitromethane	76-06-2	0.1	0.68	0.3	2.1	R22, 26, 36/37/38
Triethylamine	121-44-8	2	8	4	17	Sk R11, 20/21/22, 35
Triglycidyl isocyanurate (TGIC)	2451-62-9	-	0.1	-	-	Carc R46, 23/25, 41, 43, 48/22, 52/53
Trimellitic anhydride	552-30-7	-	0.04	-	0.12	Sen R37, 41, 42/43
Trimethylbenzenes, all isomers or mixtures	25551-13-7	25	125	-	-	
3,5,5-trimethylcyclohex-2-enone	78-59-1	-	-	5	29	R21/22, 36/37, 40
Trimethyl phosphite	121-45-9	2	10	-	-	
2,4,6-Trinitrotoluene	118-96-7	-	0.5	-	-	Sk R2, 23/24/25, 33, 51/53
Tri- <i>o</i> -tolyl phosphate	78-30-8	-	0.1	-	0.3	R39/23/24/25, 51/53
Triphenyl phosphate	115-86-6	-	3	-	6	
Tungsten & compounds (as W)	7440-33-7					
soluble compounds		-	1	-	3	
insoluble compounds and others		-	5	-	10	

Substance	CAS number	Workplace exposure limit				Comments
		Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
		ppm	mg.m <sup>-3</sup>	ppm	mg.m <sup>-3</sup>	
Turpentine	8006-64-2	100	566	150	850	R10, 20/21/22, 36/38, 43, 65, 51/53
Vanadium pentoxide	1314-62-1	-	0.05	-	-	R20/22, 37, 48/23, 63, 68, 51/53
Vinyl chloride	75-01-4	3	7.8	-	-	Carc R45, 12
Vinylidene chloride	75-35-4	10	40	-	-	R12, 20, 40
Wool process dust	See page 31	-	10	-	-	
Xylene, <i>o</i> -, <i>m</i> -, <i>p</i> - or mixed isomers	1330-20-7	50	220	100	441	Sk BMGV R10, 20/21, 38
Yttrium	7440-65-5	-	1	-	3	
Zinc chloride, fume	7646-85-7	-	1	-	2	R22, 34, 50/53
Zinc distearate	557-05-1					
inhalable dust		-	10	-	20	
respirable dust		-	4	-	-	
Zirconium compounds (as Zr)		-	5	-	10	