

Gases and vapors—Substance	Parts per million parts of air by volume	Milligrams per cubic meter of air	Gases and vapors—Substance	Parts per million parts of air by volume	Milligrams per cubic meter of air
Cyclohexanone.....	100	400	Perchloroethylene (tetrachloroethylene).....	200	1,350
Cyclohexane.....	400	1,360	Phenol.....	5	19
Cyclopropane.....	400	690	Phenylhydrazine.....	5	22
Decalene.....	.05	.3	Phosgene (carbonyl chloride).....	1	4
Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone).....	80	240	Phosphine.....	.05	.07
Diborane.....	.1	.1	Phosphorus trichloride.....	.5	.3
n-Dichlorobenzene.....	50	300	Propyl acetate.....	200	640
Dichlorodifluoromethane.....	1,000	4,950	Propyl alcohol (isopropyl alcohol).....	400	980
1,1-Dichloroethane.....	100	400	Propyl ether (isopropyl ether).....	500	2,100
1,2-Dichloroethane (ethylene dichloride).....	100	400	Propylene dichloride (1,3-dichloropropane).....	75	350
1,2-Dichloroethylene.....	200	790	Propyleneimine.....	25	60
1-Chloroethyl ether.....	15	90	Propylene oxide.....	100	240
Dichloromono-fluoromethane.....	1,000	4,200	Pyridine.....	10	30
1,1-Dichloro-1-ethoxyethane.....	10	60	Quinone.....	.1	.4
Dichlorotetrafluoroethane.....	1,000	7,000	Stibine.....	.1	.5
Diethylamine.....	25	75	Stoddard solvent.....	500	2,900
Difluorodibromomethane.....	100	650	Styrene monomer (styrene).....	100	420
Diisobutyl ketone.....	50	290	Sulfur dioxide.....	5	13
Dimethylaniline (N-dimethylaniline).....	5	25	Sulfur hexafluoride.....	1,000	6,000
Dimethylsulfate.....	1	5	Sulfur monochloride.....	1	6
Dioxane (dioxolane dioxide).....	100	360	Sulfur pentachloride.....	.025	.25
Ethyl acetate.....	400	1,400	Tertiary butyl alcohol.....	100	300
Ethyl acrylate.....	25	100	p-Tertiarybutyltoluene.....	10	40
Ethyl alcohol (ethanol).....	1,000	1,900	1,1,2,2-Tetrachloroethane.....	5	35
Ethylamine.....	25	45	Tetrahydrofuran.....	200	500
Ethylbenzene.....	200	870	Tetranitromethane.....	1	8
Ethyl bromide.....	200	820	Toluene (toluol).....	200	750
Ethyl chloride.....	1,000	2,600	o-Toluidine.....	5	22
Ethyl ether.....	400	1,200	Trichloroethylene.....	200	1,050
Ethyl formate.....	100	300	Triethylamine.....	25	100
Ethylidene chloride.....	100	850	Trifluoromono-bromomethane.....	1,000	6,100
Ethylene chlorohydrin.....	5	16	Turpentine.....	100	560
Ethylene diamine.....	10	30	Vinyl chloride (chloroethylene).....	500	1,300
Ethylene dibromide (1,2-dibromoethane).....	25	190	Vinyl toluene.....	100	480
Ethyleneimine.....	5	9	Xylene (xyol).....	200	870
Ethylene oxide.....	50	90	Xylylene.....	5	25
Fluorine.....	.1	.2			
Fluorotrichloromethane.....	1,000	5,600			
Formaldehyde.....	5	6			
Formic acid.....	5	20			
Gasoline.....	500	2,000			
Heptane (n-heptane).....	500	2,000			
Hexane (n-hexane).....	500	1,800			
Isobutane (methyl butyl ketone).....	100	410			
Isobutene (methyl isobutyl ketone).....	100	410			
Hydrazine.....	1	1.3			
Hydrogen bromide.....	5	17			
Hydrogen chloride.....	5	7			
Hydrogen cyanide.....	10	11			
Hydrogen fluoride.....	3	2			
Hydrogen peroxide, 90%.....	1	1.4			
Hydrogen selenide.....	.05	.2			
Hydrogen sulfide.....	.20	.30			
Iodine.....	.1	1			
Isophorone.....	25	140			
Isopropylamine.....	5	12			
Methyl oxide.....	25	100			
Methyl acetate.....	200	610			
Methyl acetylene.....	1,000	1,650			
Methyl acrylate.....	10	35			
Methyl alcohol (methanol).....	200	260			
Methyl bromide.....	20	80			
Methyl cellosolve (2-methoxyethanol).....	25	80			
Methyl cellosolve acetate (ethylene glycol mono-methyl ether acetate).....	25	120			
Methyl chloride.....	100	210			
Methylal (dimethoxymethane).....	1,000	3,100			
Methyl chloroform (1,1,1-trichloroethane).....	500	2,700			
Methylcyclohexane.....	500	2,000			
Methylcyclohexanol.....	100	470			
Methylcyclohexanone.....	100	460			
Methyl formate.....	100	250			
Methyl isobutyl carbinol (Methyl amyl alcohol).....	25	100			
Methyl styrene.....	100	480			
Methylene chloride (dichloromethane).....	500	1,750			
Monomethyl aniline.....	2	9			
Naphtha (coal tar).....	200	800			
Naphtha (petroleum).....	500	2,000			
Nickel carbonyl.....	.001	.007			
Nitric acid.....	5	25			
p-Nitroaniline.....	1	6			
Nitrobenzene.....	1	5			
Nitroethane.....	100	310			
Nitrogen dioxide.....	5	9			
Nitroglycerin.....	.5	5			
Nitromethane.....	100	250			
2-Nitropropane.....	50	180			
Nitrotoluene.....	5	30			
Octane.....	500	2,350			
Ozone.....	.1	.2			
Perdichlorobenzene.....	75	450			
Pentane.....	1,000	2,950			
Pentanone (methyl propyl ketone).....	200	780			

TOXIC DUSTS, FUMES, AND MISTS

Substance	Milligrams per cubic meter of air
Aldrin (1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-dimethanonaphthalene).....	0.25
Ammate (ammonium sulfamate).....	15
Antimony.....	.5
ANTU (alpha naphthyl thiourea).....	.8
Arsenic.....	.5
Barium.....	.5
Beryllium.....	2ym3
Cadmium oxide fume.....	.1
Calcium arsenate.....	.1
Chlordane (1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-4,7-methanodane).....	2
Chlorinated camphene, 60%.....	.5
Chlorinated diphenyl oxide.....	.5
Chlorodiphenyl (42% chlorine).....	1
Chlorodiphenyl (64% chlorine).....	.5
Chromic acid and chromates (as CrO ₃).....	.1
Crag herbicide (sodium 2-[sodium 2-[2,4-dichlorophenoxy] ethanol hydrogen sulfate).....	15
Cyanide (as CN).....	5
2,4-D (2,4-dichlorophenoxyacetic acid).....	10
DDT (2,2-bis [p-chlorophenyl]-1,1,1-trichloroethane).....	1
Dieidrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4,5,8-dimethanonaphthalene).....	.25
Dinitrobenzene.....	1
Dinitrotoluene.....	1.5
Dinitro-o-cresol.....	.2
EPN (O-ethyl O-p-nitrophenyl thionobenzenephosphonate).....	.5
Perbam (ferric dimethyl dithiocarbamate).....	10
Ferrovandium dust.....	1
Fluoride.....	2.5
Hydroquinone.....	2
Iron oxide fume.....	15
Lead.....	.2
Lead arsenate.....	15
Lindane (hexachlorocyclohexane, gamma isomer).....	.5

TOXIC DUSTS, FUMES, AND MISTS—Con.

Substance	Milligrams per cubic meter of air
Magnesium oxide fume.....	15
Malathion (O,O)-dimethyl dithiophosphate of diethyl mercaptosuccinate).....	15
Manganese.....	6
Mercury.....	.1
Mercury (organic compounds).....	.01
Methoxychlor (2,2-di-p-methoxyphenyl-1,1,1-trichloroethane).....	15
Molybdenum:	
soluble compounds.....	5
insoluble compounds.....	15
Nicotine.....	.5
Parathion (O,O-diethyl O-p-nitrophenyl thiophosphate).....	.1
Pentachloronaphthalene.....	.5
Pentachlorophenol.....	.5
Phosphorus (yellow).....	.1
Phosphorus pentachloride.....	1
Phosphorus pentasulfide.....	1
Picric acid.....	.1
Pyrethrum.....	2
Rotenone.....	5
Selenium compounds (as Se).....	.1
Sodium hydroxide.....	2
Sodium fluoroacetate (1080).....	.1
Strychnine.....	.15
Sulfuric acid.....	1
TEDP (tetraethyl dithionopyrophosphate).....	.2
TEPP (tetraethyl pyrophosphate).....	.05
Tellurium.....	.1
Tetryl (2,4,5-trinitrophenylmethylnitramine).....	1.5
Thiram (tetramethyl thiram disulfide).....	5
Thallium (soluble compounds).....	.1
Titanium dioxide.....	15
Trichloronaphthalene.....	5
Trinitrotoluene.....	1.5
Uranium:	
soluble compounds.....	.05
insoluble compounds.....	.25
Vanadium:	
V ₂ O ₅ dust.....	.5
V ₂ O ₅ fume.....	.1
Warfarin (3-[acetonylbenzyl]-4-hydroxycoumarin).....	.5
Zinc oxide fumes.....	15
Zirconium compounds (as Zr).....	5

MINERAL DUSTS

Millions of particles per cubic meter of air

Substance	Millions of particles per cubic meter of air
Aluminum oxide.....	50
Asbestos.....	5
Dust (nuisance, no free silica).....	50
Mica (below 5% free silica).....	20
Portland cement.....	50
Silica:	
High (above 80% free SiO ₂).....	5
Medium (5 to 80% free SiO ₂).....	20
Low (below 5% free SiO ₂).....	50
Silicon carbide.....	50
Soapstone (below 5% free SiO ₂).....	20
Talc.....	20

VENTILATION

§ 50-204.288 General ventilation and temperature requirements.

(a) Outside air shall be provided to all workrooms at the rate of 15 cubic feet per minute per person, or one and one-half air changes per hour, whichever is greater. In most instances, leakage through walls, doors, and windows will produce at least one and one-half air changes per hour.

(b) A minimum air temperature of 60° F. should be maintained at all workrooms where work of a strenuous nature is performed, and a minimum air tem-