

**WAC 296-307-62625 Permissible exposure limits of air contaminants.**

**IMPORTANT:**

The following information applies to Table 3, Permissible Exposure Limits for Air Contaminants.

- Exposure needs to be determined from personal air samples taken in the breathing zone or from monitoring representative of the employee's breathing zone.
- Ppm refers to parts of vapor or gas per million parts of air by volume, at 25 degrees C and 760 mm Hg pressure.
- Mg/m<sup>3</sup> refers to milligrams of substance per cubic meter of air.
- For a metal that is measured as the metal itself, only the CAS number for the metal is given. The CAS numbers for individual compounds of the metal are not provided. For more information about CAS registry numbers see the website: <http://www.cas.org>.
- Time weighted averages (TWA<sub>8</sub>) represent the maximum allowed average exposure for any 8-hour time period. For work periods longer than 8 hours the TWA<sub>8</sub> needs to be determined using the 8 continuous hours with the highest average concentration.
- Short-term exposure limits (STEL) represent maximum allowed average exposure for any fifteen-minute period, unless another time period is noted in Table 3.
- The ceiling represents the maximum allowed exposure for the shortest time period that can feasibly be measured.
- An "X" in the "skin" column indicates the substance can be absorbed through the skin, either by airborne or direct contact.
- Requirements for the use of gloves, coveralls, goggles, and other personal protective equipment can be found in WAC 296-307-100.
- The respirable fraction of particulate is measured by sampling with a size-selector having the following characteristics:

Mean aerodynamic diameter in micrometers	Percent passing the selector
1	97
2	91
3	74
4	50
5	30
6	17
7	9
8	5
10	1

**Table 3 "Permissible Exposure Limits for Air Contaminants"**

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Abate (Temephos)	3383-96-8	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Acetaldehyde	75-07-0	100 ppm	150 ppm	—	—
Acetic acid	64-19-7	10 ppm	20 ppm	—	—
Acetic anhydride	108-24-7	—	—	5 ppm	—
Acetone	67-64-1	750 ppm	1,000 ppm	—	—
Acetonitrile	75-05-8	40 ppm	60 ppm	—	—
2-Acetylaminofluorene	53-96-3	—	—	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Acetylene	74-86-2	Simple asphyxiant	—	—	—
Acetylene dichloride (1,2-Dichloroethylene)	540-59-0	200 ppm	250 ppm	—	—
Acetylene tetrabromide	79-27-6	1 ppm	3 ppm	—	—
Acetylsalicylic acid (Aspirin)	50-78-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Acrolein	107-02-8	0.1 ppm	0.3 ppm	—	—
Acrylamide	79-06-1	0.03 mg/m <sup>3</sup>	0.09 mg/m <sup>3</sup>	—	X
Acrylic acid	79-10-7	10 ppm	20 ppm	—	X
Acrylonitrile (Vinyl cyanide)	107-13-1	2 ppm	10 ppm	—	—
Aldrin	309-00-2	0.25 mg/m <sup>3</sup>	0.75 mg/m <sup>3</sup>	—	X
Allyl alcohol	107-18-6	2 ppm	4 ppm	—	X
Allyl chloride	107-05-1	1 ppm	2 ppm	—	—
Allyl glycidyl ether (AGE)	106-92-3	5 ppm	10 ppm	—	—
Allyl propyl disulfide	2179-59-1	2 ppm	3 ppm	—	—
alpha-Alumina (Aluminum oxide)	1344-28-1	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Aluminum (as Al)	7429-90-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Pyro powders	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Welding fumes	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Soluble salts	—	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Alkyls (NOC)	—	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Aluminum oxide (Alundum, Corundum)	7429-90-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
4-Aminodiphenyl	92-67-1	—	—	—	—
2-Aminoethanol (Ethanolamine)	141-43-5	3 ppm	6 ppm	—	—
2-Aminopyridine	504-29-0	0.5 ppm	1.5 ppm	—	—
Amitrole	61-82-5	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Ammonia	7664-41-7	25 ppm	35 ppm	—	—
Ammonium chloride, fume	12125-02-9	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Ammonium sulfamate (Ammate)	7773-06-0	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5.0 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
n-Amyl acetate	628-63-7	100 ppm	150 ppm	—	—
sec-Amyl acetate	626-38-0	125 ppm	156 ppm	—	—
Aniline and homologues	62-53-3	2 ppm	4 ppm	—	X
Anisidine (o, p-isomers)	29191-52-4	0.1 ppm	0.3 ppm	—	X
Antimony and compounds (as Sb)	7440-36-0	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
ANTU (alpha Naphthyl thiourea)	86-88-4	0.3 mg/m <sup>3</sup>	0.9 mg/m <sup>3</sup>	—	—
Argon	7440-37-1	Simple asphyxiant	—	—	—
Arsenic, organic compounds (as As)	7440-38-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Arsenic, inorganic compounds (as As) (when use is covered by WAC 296-62-07347)	7440-38-2	0.01 mg/m <sup>3</sup>	—	—	—
Arsenic, inorganic compounds (as As) (when use is not covered by WAC 296-62-07347)	7440-38-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Arsine	7784-42-1	0.05 ppm	0.15 ppm	—	—
Asbestos	—	—	—	—	—
Asphalt (Petroleum fumes)	8052-42-4	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Atrazine	1912-24-9	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Azinphos methyl (Guthion)	86-50-0	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Azodrin (Monocrotophos)	6923-22-4	0.25 mg/m <sup>3</sup>	0.75 mg/m <sup>3</sup>	—	—
Barium, soluble compounds (as Ba)	7440-39-3	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Barium sulfate	7727-43-7	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Baygon (Propoxur)	114-26-1	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Benomyl	17804-35-2	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Benzene	71-43-2	1 ppm	5 ppm	—	—
Benzidine	92-87-5	—	—	—	—
p-Benzoquinone (Quinone)	106-51-4	0.1 ppm	0.3 ppm	—	—
Benzo(a) pyrene (Coal tar pitch volatiles)	65996-93-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Benzoyl peroxide	94-36-0	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Benzyl chloride	100-44-7	1 ppm	3 ppm	—	—
Beryllium and beryllium compounds (as Be) (see chapter 296-850 WAC)	7440-41-7	0.0002 mg/m <sup>3</sup>	0.002 mg/m <sup>3</sup>	—	—
Biphenyl (Diphenyl)	92-52-4	0.2 ppm	0.6 ppm	—	—
Bismuth telluride, undoped	1304-82-1	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Bismuth telluride, Se-doped	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Borates, tetra, sodium salts	—	—	—	—	—
Anhydrous	1330-43-4	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Decahydrate	1303-96-4	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Pentahydrate	12179-04-3	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Boron oxide	1303-86-2	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Boron tribromide	10294-33-4	—	—	1 ppm	—
Boron trifluoride	6737-07-2	—	—	1 ppm	—
Bromacil	314-40-9	1 ppm	3 ppm	—	—
Bromine	7726-95-6	0.1 ppm	0.3 ppm	—	—
Bromine pentafluoride	7789-30-2	0.1 ppm	0.3 ppm	—	—
Bromochloromethane (Chlorobromomethane)	74-97-5	200 ppm	250 ppm	—	—
Bromoform	15-25-2	0.5 ppm	1.5 ppm	—	X
Butadiene (1,3-butadiene)	106-99-0	1 ppm	5 ppm	—	—
Butane	106-97-8	800 ppm	1,000 ppm	—	—
Butanethiol (Butyl mercaptan)	109-79-5	0.5 ppm	1.5 ppm	—	—
2-Butanone (Methyl ethyl ketone)	78-93-3	200 ppm	300 ppm	—	—
2-Butoxy ethanol (Butyl cellosolve)	111-76-2	25 ppm	38 ppm	—	X
n-Butyl acetate	123-86-4	150 ppm	200 ppm	—	—
sec-Butyl acetate	105-46-4	200 ppm	250 ppm	—	—
tert-Butyl acetate	540-88-5	200 ppm	250 ppm	—	—
Butyl acrylate	141-32-2	10 ppm	20 ppm	—	—
n-Butyl alcohol	71-36-3	—	—	50 ppm	X
sec-Butyl alcohol	78-92-2	100 ppm	150 ppm	—	—
tert-Butyl alcohol	75-65-0	100 ppm	150 ppm	—	—
Butylamine	109-73-9	—	—	5 ppm	X
Butyl cellosolve (2-Butoxy ethanol)	111-76-2	25 ppm	38 ppm	—	—
tert-Butyl chromate (as CrOs)	1189-85-1	—	—	0.1 mg/m <sup>3</sup>	X
n-Butyl glycidyl ether (BGE)	2426-08-6	25 ppm	38 ppm	—	—
n-Butyl lactate	138-22-7	5 ppm	10 ppm	—	—
Butyl mercaptan	109-79-5	0.5 ppm	1.5 ppm	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
o-sec-Butylphenol	89-72-5	5 ppm	10 ppm	—	X
p-tert-Butyl-toluene	98-51-1	10 ppm	20 ppm	—	—
Cadmium oxide fume (as Cd)	1306-19-0	0.005 mg/m <sup>3</sup>	—	—	—
Cadmium dust and salts (as Cd)	7440-43-9	0.005 mg/m <sup>3</sup>	—	—	—
Calcium arsenate	—	0.01 mg/m <sup>3</sup>	—	—	—
Calcium carbonate	1317-65-3	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Calcium cyanamide	156-62-7	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Calcium hydroxide	1305-62-0	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Calcium oxide	1305-78-8	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Calcium silicate	1344-95-2	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Calcium sulfate	7778-18-9	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Camphor (synthetic)	76-22-2	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Caprolactam	105-60-2	—	—	—	—
Dust	—	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Vapor	—	5 ppm	10 ppm	—	—
Captafol (Difolatan)	2425-06-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Captan	133-06-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Carbaryl (Sevin)	63-25-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Carbofuran (Furadon)	1563-66-2	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Carbon black	1333-86-4	3.5 mg/m <sup>3</sup>	7 mg/m <sup>3</sup>	—	—
Carbon dioxide	124-38-9	5,000 ppm	30,000 ppm	—	—
Carbon disulfide	75-15-0	4 ppm	12 ppm	—	X
Carbon monoxide	630-08-0	35 ppm	200 ppm (5 min.)	1,500 ppm	—
Carbon tetrabromide	558-13-4	0.1 ppm	0.3 ppm	—	—
Carbon tetrachloride (Tetrachloromethane)	56-23-5	2 ppm	4 ppm	—	X
Carbonyl chloride (Phosgene)	7803-51-2	0.1 ppm	0.3 ppm	—	—
Carbonyl fluoride	353-50-4	2 ppm	5 ppm	—	—
Catechol (Pyrocatechol)	120-80-9	5 ppm	10 ppm	—	X
Cellosolve acetate (2-Ethoxyethylacetate)	111-15-9	5 ppm	10 ppm	—	X
Cellulose (paper fiber)	9004-34-6	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Cesium hydroxide	21351-79-1	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Chlordane	57-74-9	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Chlorinated camphene (Toxaphen)	8001-35-2	0.5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	—	X
Chlorinated diphenyl oxide	55720-99-5	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Chlorine	7782-50-5	0.5 ppm	—	1 ppm	—
Chlorine dioxide	10049-04-4	0.1 ppm	0.3 ppm	—	—
Chlorine trifluoride	7790-91-2	—	—	0.1 ppm	—
Chloroacetaldehyde	107-20-0	—	—	1 ppm	—
a-Chloroacetophenone (Phenacyl chloride)	532-21-4	0.05 ppm	0.15 ppm	—	—
Chloroacetyl chloride	79-04-9	0.05 ppm	0.15 ppm	—	—
Chlorobenzene (Monochlorobenzene)	108-90-7	75 ppm	113 ppm	—	—
o-Chlorobenzylidene malononitrile (OCBM)	2698-41-1	—	—	0.05 ppm	X

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Chlorobromomethane	74-97-5	200 ppm	250 ppm	—	—
2-Chloro-1, 3-butadiene (beta-Chloroprene)	126-99-8	10 ppm	20 ppm	—	X
Chlorodifluoromethane	75-45-6	1,000 ppm	1,250 ppm	—	—
Chlorodiphenyl (42% Chlorine) (PCB) (Polychlorobiphenyls)	53469-21-9	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
Chlorodiphenyl (54% Chlorine) (Polychlorobiphenyls (PCB))	11097-69-1	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
1-Chloro-2, 3-epoxypropane (Epichlorhydrin)	106-89-8	2 ppm	4 ppm	—	X
2-Chloroethanol (Ethylene chlorohydrin)	107-07-3	—	—	1 ppm	X
Chloroethylene (vinyl chloride)	75-01-4	1 ppm	5 ppm	—	—
Chloroform (Trichloromethane)	67-66-3	2 ppm	4 ppm	—	—
1-Chloro-1-nitropropane	600-25-9	2 ppm	4 ppm	—	—
bis-Chloromethyl ether	542-88-1	—	—	—	—
Chloromethyl methyl ether (Methyl chloromethyl ether)	107-30-2	—	—	—	—
Chloropentafluoroethane	76-15-3	1,000 ppm	1,250 ppm	—	—
Chloropicrin (Nitrotrichloromethane)	76-06-2	0.1 ppm	0.3 ppm	—	—
beta-Chloroprene (2-Chloro-1, 3-butadiene)	126-99-8	10 ppm	20 ppm	—	X
o-Chlorostyrene	2039-87-4	50 ppm	75 ppm	—	—
o-Chlorotoluene	95-49-8	50 ppm	75 ppm	—	—
2-Chloro-6-trichloromethyl pyridine (Nitrapyrin)	1929-82-4	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Chlorpyrifos	2921-88-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Chromic acid and chromates (as CrO <sub>3</sub> )	Varies with compound	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Chromium, soluble, chromic and chromous salts (as Cr)	7440-47-3	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Chromium (VI) compounds (as Cr)	—	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	—
Chromium metal and insoluble salts	7440-47-3	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Chromyl chloride	14977-61-8	0.025 ppm	0.075 ppm	—	—
Chrysene (Coal tar pitch volatiles)	65996-93-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Clpidol	2971-90-6	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Coal dust (less than 5% SiO <sub>2</sub> )	—	—	—	—	—
Respirable fraction	—	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Coal dust (greater than or equal to 5% SiO <sub>2</sub> )	—	—	—	—	—
Respirable fraction	—	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Coal tar pitch volatiles (benzene soluble fraction) (Particulate polycyclic aromatic hydrocarbons)	65996-93-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Cobalt, metal fume & dust (as Co)	7440-48-4	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	—
Cobalt carbonyl (as Co)	10210-68-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Cobalt hydrocarbonyl (as Co)	16842-03-8	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Coke oven emissions	—	0.15 mg/m <sup>3</sup>	—	—	—
Copper (as Cu)	7440-50-8	—	—	—	—
Fume	—	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Dusts and mists	—	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Cotton dust (raw) (waste sorting, blending, cleaning, willowing and garetting)	—	1 mg/m <sup>3</sup>	—	—	—
Corundum (Aluminum oxide)	7429-90-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Crag herbicide (Sesone, Sodium-2, 4-dichloro-phenoxyethyl sulfate)	136-78-7	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Cresol (all isomers)	1319-77-3	5 ppm	10 ppm	—	X
Crotonaldehyde	123-73-9; 4170-30-3	2 ppm	4 ppm	—	—
Crufomate	299-86-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Cumene	98-82-8	50 ppm	75 ppm	—	X
Cyanamide	420-04-2	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Cyanide (as CN)	Varies with compound	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	X
Cyanogen	460-19-5	10 ppm	20 ppm	—	—
Cyanogen chloride	506-77-4	—	—	0.3 ppm	—
Cyclohexane	110-82-7	300 ppm	375 ppm	—	—
Cyclohexanol	108-93-0	50 ppm	75 ppm	—	X
Cyclohexanone	108-94-1	25 ppm	38 ppm	—	X
Cyclohexene	110-83-8	300 ppm	375 ppm	—	—
Cyclohexylamine	108-91-8	10 ppm	20 ppm	—	—
Cyclonite (RDX)	121-82-4	1.5 mg/m <sup>3</sup>	3.0 mg/m <sup>3</sup>	—	X
Cyclopentadiene	542-92-7	75 ppm	113 ppm	—	—
Cyclopentane	287-92-3	600 ppm	750 ppm	—	—
Cyhexatin (Tricyclohexyltin hydroxide)	13121-70-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
2,4-D (Dichlorophenoxy-acetic acid)	94-75-7	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
DBCP (1,2-Dibromo-3-chloropropane)	96-12-8	0.001 ppm	—	0.005 ppm	—
DDT (Dichlorodiphenyltri-chloroethane)	50-29-3	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
DDVP, (Dichlorvos)	62-73-7	0.1 ppm	0.3 ppm	—	X
Dasanit (Fensulfothion)	115-90-2	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Decaborane	17702-41-9	0.05 ppm	0.15 ppm	—	X
Demeton	8065-48-3	0.01 ppm	0.03 ppm	—	X
Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone)	123-42-2	50 ppm	75 ppm	—	—
1, 2-Diaminoethane (Ethylenediamine)	107-15-3	10 ppm	20 ppm	—	—
Diazinon	333-41-5	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Diazomethane	334-88-3	0.2 ppm	0.6 ppm	—	—
Diborane	19287-45-7	0.1 ppm	0.3 ppm	—	—
Dibrom (see Naled)	300-76-5	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	X
1, 2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.001 ppm	—	0.005 ppm	—
2-N-Dibutylamino ethanol	102-81-8	2 ppm	4 ppm	—	X
Dibutyl phosphate	107-66-4	1 ppm	2 ppm	—	—
Dibutyl phthalate	84-74-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Dichloroacetylene	7572-29-4	—	—	0.1 ppm	—
o-Dichlorobenzene	95-50-1	—	—	50 ppm	—
p-Dichlorobenzene	106-46-7	75 ppm	110 ppm	—	—
3, 3'-Dichlorobenzidine	91-94-1	—	—	—	—
Dichlorodiphenyltri-chloroethane (DDT)	50-29-3	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
Dichlorodifluoromethane	75-71-8	1,000 ppm	1,250 ppm	—	—
1, 3-Dichloro-5, 5-dimethyl hydantoin	118-52-5	0.2 mg/m <sup>3</sup>	0.4 mg/m <sup>3</sup>	—	—
1, 1-Dichloroethane (Ethyldine chloride)	75-34-3	100 ppm	150 ppm	—	—
1, 2-Dichloroethane (Ethylene dichloride)	107-06-2	1 ppm	2 ppm	—	—
1, 1-Dichloroethylene (Vinylidene chloride)	75-35-4	1 ppm	3 ppm	—	—
1, 2-Dichloroethylene (Acetylene dichloride)	540-59-0	200 ppm	250 ppm	—	—
Dichloroethyl ether	111-44-4	5 ppm	10 ppm	—	X
Dichlorofluoromethane	75-43-4	10 ppm	20 ppm	—	—
Dichloromethane (Methylene chloride)	75-09-2	25 ppm	125 ppm	—	—
1, 1-Dichloro-1-nitroethane	594-72-9	2 ppm	10 ppm	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Dichlorophenoxyacetic acid (2, 4-D)	94-75-7	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
1, 2-Dichloropropane (Propylene dichloride)	78-87-5	75 ppm	110 ppm	—	—
Dichloropropene	542-75-6	1 ppm	3 ppm	—	X
2, 2-Dichloropropionic acid	75-99-0	1 ppm	3 ppm	—	—
Dichlorotetrafluoroethane	76-14-2	1,000 ppm	1,250 ppm	—	—
Dichlorvos (DDVP)	62-73-7	0.1 ppm	0.3 ppm	—	X
Dicrotophos	141-66-2	0.25 mg/m <sup>3</sup>	0.75 mg/m <sup>3</sup>	—	X
Dicyclopentadiene	77-73-6	5 ppm	10 ppm	—	—
Dicyclopentadienyl iron	102-54-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Dieldrin	60-57-1	0.25 mg/m <sup>3</sup>	0.75 mg/m <sup>3</sup>	—	X
Diethanolamine	111-42-2	3 ppm	6 ppm	—	—
Diethylamine	109-89-7	10 ppm	25 ppm	—	—
2-Diethylaminoethanol	100-37-8	10 ppm	20 ppm	—	X
Diethylene triamine	111-40-0	1 ppm	3 ppm	—	X
Diethyl ether (Ethyl ether)	60-29-7	400 ppm	500 ppm	—	—
Diethyl ketone	96-22-0	200 ppm	250 ppm	—	—
Diethyl phthalate	84-66-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Difluorodibromomethane	75-61-6	100 ppm	150 ppm	—	—
Difolatan (Captafol)	2425-06-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Diglycidyl ether (DGE)	2238-07-5	0.1 ppm	0.3 ppm	—	—
Dihydroxybenzene (Hydroquinone)	123-31-9	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Diisobutyl ketone (2, 6-Dimethylheptanone)	108-83-8	25 ppm	38 ppm	—	—
Diisopropylamine	108-18-9	5 ppm	10 ppm	—	X
Dimethoxymethane (Methylal)	109-87-5	1,000 ppm	1,250 ppm	—	—
Dimethyl acetamide	127-19-5	10 ppm	20 ppm	—	X
Dimethylamine	124-40-3	10 ppm	20 ppm	—	—
4-Dimethylaminoazo benzene	60-11-7	—	—	—	—
Dimethylaminobenzene (Xylidene)	1300-73-8	2 ppm	4 ppm	—	X
Dimethylaniline (N, N-Dimethylaniline)	121-69-7	5 ppm	10 ppm	—	X
Dimethylbenzene (Xylene)	1300-73-8	100 ppm	150 ppm	—	—
Dimethyl-1, 2-dibromo-2, 2-dichloroethyl phosphate (Naled)	300-76-5	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	X
Dimethylformamide	68-12-2	10 ppm	20 ppm	—	X
2, 6-Dimethylheptanone (Diisobutyl ketone)	108-83-8	25 ppm	38 ppm	—	—
1, 1-Dimethylhydrazine	57-14-7	0.5 ppm	1.5 ppm	—	X
Dimethyl phthalate	131-11-3	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Dimethyl sulfate	77-78-1	0.1 ppm	0.3 ppm	—	X
Dinitolmide (3, 5-Dinitro-o-toluamide)	148-01-6	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Dinitrobenzene (all isomers - alpha, meta and para)	528-29-0; 99-65-0; 100-25-4	0.15 ppm	0.45 ppm	—	X
Dinitro-o-cresol	534-52-1	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
3, 5-Dinitro-o-toluamide (Dinitolmide)	148-01-6	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Dinitrotoluene	25321-14-6	1.5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
Dioxane (Diethylene dioxide)	123-91-1	25 ppm	38 ppm	—	X
Dioxathion	78-34-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Diphenyl (Biphenyl)	92-52-4	0.2 ppm	0.6 ppm	—	—
Diphenylamine	122-39-4	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Diphenylmethane diisocyanate (Methylene bisphenyl isocyanate (MDI))	101-68-8	—	—	0.02 ppm	—
Dipropylene glycol methyl ether	34590-94-8	100 ppm	150 ppm	—	X
Dipropyl ketone	123-19-3	50 ppm	75 ppm	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Diquat	85-00-7	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Di-sec, Octyl phthalate (Di-2-ethylhexylphthalate)	117-81-7	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Disulfiram	97-77-8	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Disulfoton	298-04-4	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
2, 6-Di-tert-butyl-p-cresol	128-37-0	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Diuron	330-54-1	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Divinyl benzene	1321-74-0	10 ppm	20 ppm	—	—
Emery	12415-34-8	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Endosulfan (Thiodan)	115-29-7	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Endrin	72-20-8	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Epichlorhydrin (1-Chloro-2,3-epoxypropane)	106-89-8	2 ppm	4 ppm	—	X
EPN	2104-64-5	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
1, 2-Epoxypropane (Propylene oxide)	75-56-9	20 ppm	30 ppm	—	—
2, 3-Epoxy-1-propanol (Glycidol)	556-52-5	25 ppm	38 ppm	—	—
Ethane	—	Simple asphyxiant	—	—	—
Ethanethiol (Ethyl mercaptan)	75-08-1	0.5 ppm	1.5 ppm	—	—
Ethanol (Ethyl alcohol)	64-17-5	1,000 ppm	1,250 ppm	—	—
Ethanolamine (2-Aminoethanol)	141-43-5	3 ppm	6 ppm	—	—
Ethion	563-12-2	0.4 mg/m <sup>3</sup>	1.2 mg/m <sup>3</sup>	—	X
2-Ethoxyethanol (Glycol monoethyl ether)	110-80-5	5 ppm	10 ppm	—	X
2-Ethoxyethyl acetate (Cellosolve acetate)	111-15-9	5 ppm	10 ppm	—	X
Ethyl acetate	141-78-6	400 ppm	500 ppm	—	—
Ethyl acrylate	140-88-5	5 ppm	25 ppm	—	X
Ethyl alcohol (ethanol)	64-17-5	1,000 ppm	1,250 ppm	—	—
Ethylamine	75-04-07	10 ppm	20 ppm	—	—
Ethyl amyl ketone (5-Methyl-3-heptanone)	541-85-5	25 ppm	38 ppm	—	—
Ethyl benzene	100-41-4	100 ppm	125 ppm	—	—
Ethyl bromide	74-96-4	200 ppm	250 ppm	—	—
Ethyl butyl ketone (3-Heptanone)	106-35-4	50 ppm	75 ppm	—	—
Ethyl chloride	75-00-3	1,000 ppm	1,250 ppm	—	—
Ethylene	74-85-1	Simple asphyxiant	—	—	—
Ethylene chlorohydrin (2-Chloroethanol)	107-07-3	—	—	1 ppm	X
Ethylenediamine (1,2-Diaminoethane)	107-15-3	10 ppm	20 ppm	—	X
Ethylene dibromide	106-93-4	0.1 ppm	0.5 ppm	—	—
Ethylene dichloride (1,2-Dichloroethane)	107-06-2	1 ppm	2 ppm	—	—
Ethylene glycol	107-21-1	—	—	50 ppm	—
Ethylene glycol dinitrate	628-96-6	—	0.1 mg/m <sup>3</sup>	—	X
Ethylene glycol monomethyl ether acetate (Methyl cellosolve acetate)	—	5 ppm	10 ppm	—	X
Ethyleneimine	151-56-4	—	—	—	X
Ethylene oxide	75-21-8	1 ppm	5 ppm	—	—
Ethyl ether (Diethyl ether)	60-29-7	400 ppm	500 ppm	—	—
Ethyl formate	109-94-4	100 ppm	125 ppm	—	—
Ethylidene chloride (1, 1-Dichloroethane)	107-06-2	1 ppm	2 ppm	—	—
Ethylidene norbornene	16219-75-3	—	—	5.0 ppm	—
Ethyl mercaptan (Ethanethiol)	75-08-1	0.5 ppm	1.5 ppm	—	—
n-Ethylmorpholine	100-74-3	5 ppm	10 ppm	—	X
Ethyl sec-amyl ketone (5-methyl-3-heptanone)	541-85-5	25 ppm	38 ppm	—	—
Ethyl silicate	78-10-4	10 ppm	20 ppm	—	—
Fenamiphos	22224-92-6	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Fensulfothion (Dasanit)	115-90-2	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Fenthion	55-38-9	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Ferbam	—	—	—	—	—
Total particulate	14484-64-1	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Ferrovandium dust	12604-58-9	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Fluorides (as F)	Varies with compound	2.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	—	—
Fluorine	7782-41-4	0.1 ppm	0.3 ppm	—	—
Fluorotrichloromethane (see Trichlorofluoro methane)	75-69-4	—	—	1,000 ppm	—
Fonofos	944-22-9	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Formaldehyde	50-00-0	0.75 ppm	2 ppm	—	—
Formamide	75-12-7	20 ppm	30 ppm	—	—
Formic acid	64-18-6	5 ppm	10 ppm	—	—
Furadon (carbofuran)	1563-66-2	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Furfural	98-01-1	2 ppm	4 ppm	—	X
Furfuryl alcohol	98-00-0	10 ppm	15 ppm	—	X
Gasoline	8006-61-9	300 ppm	500 ppm	—	—
Germanium tetrahydride	7782-65-2	0.2 ppm	0.6 ppm	—	—
Glass, fibrous or dust	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Gluteraldehyde	111-30-8	—	—	0.2 ppm	—
Glycerin mist	56-81-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Glycidol (2, 3-Epoxy-1-propanol)	556-52-5	25 ppm	38 ppm	—	—
Glycol monoethyl ether (2-Ethoxyethanol)	110-80-5	5 ppm	10 ppm	—	X
Grain dust (oat, wheat, barley)	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Graphite, natural	7782-42-5	—	—	—	—
Respirable particulate	—	2.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	—	—
Graphite, synthetic	—	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Guthion (Azinphosmethyl)	86-50-0	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Gypsum	13397-24-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Hafnium	7440-58-6	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Helium	—	Simple asphyxiant	—	—	—
Heptachlor	76-44-8	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Heptane (n-heptane)	142-82-5	400 ppm	500 ppm	—	—
2-Heptanone (Methyl n-amyl ketone)	110-43-0	50 ppm	75 ppm	—	—
3-Heptanone (Ethyl butyl ketone)	106-35-4	50 ppm	75 ppm	—	—
Hexachlorobutadiene	87-68-3	0.02 ppm	0.06 ppm	—	X
Hexachlorocyclopentadiene	77-47-4	0.01 ppm	0.03 ppm	—	—
Hexachloroethane	67-72-1	1 ppm	3 ppm	—	X
Hexachloronaphthalene	1335-87-1	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Hexafluoroacetone	684-16-2	0.1 ppm	0.3 ppm	—	X
Hexane	—	—	—	—	—
n-hexane	110-54-3	50 ppm	75 ppm	—	—
other isomers	Varies with compound	500 ppm	1,000 ppm	—	—
2-Hexanone (Methyl-n-butyl ketone)	591-78-6	5 ppm	10 ppm	—	—
Hexone (Methyl isobutyl ketone)	108-10-1	50 ppm	75 ppm	—	—
sec-Hexyl acetate	108-84-9	50 ppm	75 ppm	—	—
Hexylene glycol	107-41-5	—	—	25 ppm	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Hydrazine	302-01-2	0.1 ppm	0.3 ppm	—	X
Hydrogen	—	Simple asphyxiant	—	—	—
Hydrogenated terphenyls	61788-32-7	0.5 ppm	1.5 ppm	—	—
Hydrogen bromide	10035-10-6	—	—	3.0 ppm	—
Hydrogen chloride	7647-01-0	—	—	5.0 ppm	—
Hydrogen cyanide	74-90-8	—	4.7 ppm	—	X
Hydrogen fluoride	7664-39-3	—	—	3 ppm	—
Hydrogen peroxide	7722-84-1	1 ppm	3 ppm	—	—
Hydrogen selenide (as Se)	7783-07-5	0.05 ppm	0.15 ppm	—	—
Hydrogen sulfide	7783-06-4	10 ppm	15 ppm	—	—
Hydroquinone (Dihydroxybenzene)	123-31-9	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
4-Hydroxy-4-methyl-2-pentanone (Diacetone alcohol)	123-42-2	50 ppm	75 ppm	—	—
2-Hydroxypropyl acrylate	99-61-1	0.5 ppm	1.5 ppm	—	X
Indene	95-13-6	10 ppm	20 ppm	—	—
Indium and compounds (as In)	7440-74-6	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Iodine	7553-56-2	—	—	0.1 ppm	—
Iodoform	75-47-8	0.6 ppm	1.8 ppm	—	—
Iron oxide dust and fume (as Fe)	1309-37-1	—	—	—	—
Total particulate	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Iron pentacarbonyl (as Fe)	13463-40-6	0.1 ppm	0.2 ppm	—	—
Iron salts, soluble (as Fe)	Varies with compound	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Isoamyl acetate	123-92-2	100 ppm	150 ppm	—	—
Isoamyl alcohol (primary and secondary)	123-51-3	100 ppm	125 ppm	—	—
Isobutyl acetate	110-19-0	150 ppm	188 ppm	—	—
Isobutyl alcohol	78-83-1	50 ppm	75 ppm	—	—
Isooctyl alcohol	26952-21-6	50 ppm	75 ppm	—	X
Isophorone	78-59-1	4 ppm	—	5 ppm	—
Isophorone diisocyanate	4098-71-9	0.005 ppm	0.02 ppm	—	X
Isopropoxyethanol	109-59-1	25 ppm	38 ppm	—	—
Isopropyl acetate	108-21-4	250 ppm	310 ppm	—	—
Isopropyl alcohol	67-63-0	400 ppm	500 ppm	—	—
Isopropylamine	75-31-0	5 ppm	10 ppm	—	—
N-Isopropylaniline	768-52-5	2 ppm	4 ppm	—	X
Isopropyl ether	108-20-3	250 ppm	313 ppm	—	—
Isopropyl glycidyl ether (IGE)	4016-14-2	50 ppm	75 ppm	—	—
Kaolin	—	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Ketene	463-51-4	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
Lannate (Methomyl)	16752-77-5	2.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	—	—
Lead, inorganic (as Pb)	7439-92-1	0.05 mg/m <sup>3</sup>	—	—	—
Lead arsenate (as Pb)	3687-31-8	0.05 mg/m <sup>3</sup>	—	—	—
Lead chromate (as Pb)	7758-97-6	0.05 mg/m <sup>3</sup>	—	—	—
Limestone	1317-65-3	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Lindane	58-89-9	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Lithium hydride	7580-67-8	0.025 mg/m <sup>3</sup>	0.075 mg/m <sup>3</sup>	—	—
L.P.G. (liquified petroleum gas)	68476-85-7	1,000 ppm	1,250 ppm	—	—
Magnesite	546-93-0	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Magnesium oxide fume	1309-48-4	—	—	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Malathion	121-75-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	X
Maleic anhydride	108-31-6	0.25 ppm	0.75 ppm	—	—
Manganese and compounds (as Mn)	7439-96-5	—	—	5 mg/m <sup>3</sup>	—
Manganese cyclopentadienyl tricarbonyl (as Mn)	12079-65-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Manganese tetroxide and fume (as Mn)	7439-96-5	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Marble	1317-65-3	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
MBOCA (4, 4'-Methylene bis (2-chloro-aniline))	101-14-4	—	—	—	X
MDA (4, 4-Methylene dianiline)	101-77-9	0.01 ppm	0.1 ppm	—	X
MDI (Methylene bisphenyl isocyanate) (Diphenylmethane diisocyanate)	101-68-8	—	—	0.02 ppm	—
MEK (Methyl ethyl ketone) (2-Butanone)	78-93-3	200 ppm	300 ppm	—	—
MEKP (Methyl ethyl ketone peroxide)	1338-23-4	—	—	0.2 ppm	—
Mercury (as Hg)	7439-97-6	—	—	—	—
Aryl and inorganic	—	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Organo-alkyl compounds	—	0.01 mg/m <sup>3</sup>	0.03 mg/m <sup>3</sup>	—	X
Vapor	—	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	X
Mesityl oxide	141-79-7	15 ppm	25 ppm	—	—
Methacrylic acid	79-41-4	20 ppm	30 ppm	—	X
Methane	—	Simple asphyxiant	—	—	—
Methanethiol (Methyl mercaptan)	74-93-1	0.5 ppm	1.5 ppm	—	—
Methanol (Methyl alcohol)	67-56-1	200 ppm	250 ppm	—	X
Methomyl (lannate)	16752-77-5	2.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	—	—
Methoxychlor	72-43-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
2-Methoxyethanol (Methyl cellosolve)	109-86-4	5 ppm	10 ppm	—	X
2-Methoxyethyl acetate (Methyl cellosolve acetate)	110-49-6	5 ppm	10 ppm	—	X
4-Methoxyphenol	150-76-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Methyl acetate	79-20-9	200 ppm	250 ppm	—	—
Methyl acetylene (propyne)	74-99-7	1,000 ppm	1,250 ppm	—	—
Methyl acetylene-propadiene mixture (MAPP)	—	1,000 ppm	1,250 ppm	—	—
Methyl acrylate	96-33-3	10 ppm	20 ppm	—	X
Methylacrylonitrile	126-98-7	1 ppm	3 ppm	—	X
Methylal (Dimethoxy-methane)	109-87-5	1,000 ppm	1,250 ppm	—	—
Methyl alcohol (methanol)	67-56-1	200 ppm	250 ppm	—	X
Methylamine	74-89-5	10 ppm	20 ppm	—	—
Methyl amyl alcohol (Methyl isobutyl carbinol)	108-11-2	25 ppm	40 ppm	—	X
Methyl n-amyl ketone (2-Heptanone)	110-43-0	50 ppm	75 ppm	—	—
N-Methyl aniline (Monomethyl aniline)	100-61-8	0.5 ppm	1.5 ppm	—	X
Methyl bromide	74-83-9	5 ppm	10 ppm	—	X
Methyl-n-butyl ketone (2-Hexanone)	591-78-6	5 ppm	10 ppm	—	—
Methyl cellosolve (2-Methoxyethanol)	109-86-4	5 ppm	10 ppm	—	X
Methyl cellosolve acetate (2-Methoxyethyl acetate)	110-49-6	5 ppm	10 ppm	—	X
Methyl chloride	74-87-3	50 ppm	100 ppm	—	—
Methyl chloroform (1, 1, 1-trichlorethane)	71-55-6	350 ppm	450 ppm	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Methyl chloromethyl ether (chloromethyl methyl ether)	107-30-2	—	—	—	—
Methyl 2-cyanoacrylate	137-05-3	2 ppm	4 ppm	—	—
Methylcyclohexane	108-87-2	400 ppm	500 ppm	—	—
Methylcyclohexanol	25639-42-3	50 ppm	75 ppm	—	—
Methylcyclohexanone	583-60-8	50 ppm	75 ppm	—	X
Methylcyclopentadienyl manganese tricarbonyl (as Mn)	12108-13-3	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Methyl demeton	8022-00-2	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Methylene bisphenyl isocyanate (MDI) (Diphenylmethane diisocyanate)	101-68-8	—	—	0.02 ppm	—
4, 4'-Methylene bis (2-chloro-aniline) (MBOCA)	101-14-4	—	—	—	X
Methylene bis (4-cyclohexylisocyanate)	5124-30-1	—	—	0.01 ppm	—
Methylene chloride (Dichloromethane)	75-09-2	25 ppm	125 ppm	—	—
4, 4-Methylene dianiline (MDA)	101-77-9	0.01 ppm	0.1 ppm	—	X
Methyl ethyl ketone (MEK) (2-Butanone)	78-93-3	200 ppm	300 ppm	—	—
Methyl ethyl ketone peroxide (MEKP)	1338-23-4	—	—	0.2 ppm	—
Methyl formate	107-31-3	100 ppm	150 ppm	—	—
5-Methyl-3-heptanone (Ethyl amyl ketone)	541-85-5	25 ppm	38 ppm	—	—
Methyl hydrazine (Monomethyl hydrazine)	60-34-4	—	—	0.2 ppm	X
Methyl iodide	74-88-4	2 ppm	4 ppm	—	X
Methyl isoamyl ketone	110-12-3	50 ppm	75 ppm	—	—
Methyl isobutyl carbinol (Methyl amyl alcohol)	108-11-2	25 ppm	40 ppm	—	X
Methyl isobutyl ketone (Hexone)	108-10-1	50 ppm	75 ppm	—	—
Methyl isocyanate	624-83-9	0.02 ppm	0.06 ppm	—	X
Methyl isopropyl ketone	563-80-4	200 ppm	250 ppm	—	—
Methyl mercaptan (Methanethiol)	74-93-1	0.5 ppm	1.5 ppm	—	—
Methyl methacrylate	80-62-6	100 ppm	150 ppm	—	—
Methyl parathion	298-00-0	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Methyl propyl ketone (2-Pentanone)	107-87-9	200 ppm	250 ppm	—	—
Methyl silicate	684-84-5	1 ppm	3 ppm	—	—
alpha-Methyl styrene	98-83-9	50 ppm	100 ppm	—	—
Mevinphos (Phosdrin)	7786-34-7	0.01 ppm	0.03 ppm	—	X
Metribuzin	21087-64-9	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Mica (Silicates) Respirable fraction	12001-26-2	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	—
Molybdenum (as Mo)	7439-98-7	—	—	—	—
Soluble compounds	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Insoluble compounds	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Monochlorobenzene (Chlorobenzene)	108-90-7	75 ppm	113 ppm	—	—
Monocrotophos (Azodrin)	6923-22-4	0.25 mg/m <sup>3</sup>	0.75 mg/m <sup>3</sup>	—	—
Monomethyl aniline (N-Methyl aniline)	100-61-8	0.5 ppm	1.5 ppm	—	X
Monomethyl hydrazine	—	—	—	0.2 ppm	—
Morpholine	110-91-8	20 ppm	30 ppm	—	X
Naled (Dibrom)	300-76-5	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	X
Naphtha	8030-30-6	100 ppm	150 ppm	—	X
Naphthalene	91-20-3	10 ppm	15 ppm	—	—
alpha-Naphthylamine	134-32-7	—	—	—	—
beta-Naphthylamine	91-59-8	—	—	—	—
Neon	7440-01-9	Simple asphyxiant	—	—	—
Nickel carbonyl (as Ni)	13463-39-3	0.001 ppm	0.003 ppm	—	—
Nickel (as Ni)	7440-02-0	—	—	—	—
Metal and insoluble compounds	—	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Soluble compounds	—	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Nicotine	54-11-5	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Nitrapyrin (2-Chloro-6 trichloromethyl pyridine)	1929-82-4	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Nitric acid	7697-37-2	2 ppm	4 ppm	—	—
Nitric oxide	10102-43-9	25 ppm	38 ppm	—	—
p-Nitroaniline	100-01-6	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	X
Nitrobenzene	98-95-3	1 ppm	3 ppm	—	X
4-Nitrobiphenyl	92-93-3	—	—	—	—
p-Nitrochlorobenzene	100-00-5	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
4-Nitrodiphenyl	—	—	—	—	—
Nitroethane	79-24-3	100 ppm	150 ppm	—	—
Nitrogen	7727-37-9	Simple asphyxiant	—	—	—
Nitrogen dioxide	10102-44-0	—	1 ppm	—	—
Nitrogen oxide (Nitrous oxide)	10024-97-2	50 ppm	75 ppm	—	—
Nitrogen trifluoride	7783-54-2	10 ppm	20 ppm	—	—
Nitroglycerin	55-63-0	—	0.1 mg/m <sup>3</sup>	—	X
Nitromethane	75-52-5	100 ppm	150 ppm	—	—
1-Nitropropane	108-03-2	25 ppm	38 ppm	—	—
2-Nitropropane	79-46-9	10 ppm	20 ppm	—	—
N-Nitrosodimethylamine	62-75-9	—	—	—	—
Nitrotoluene	—	—	—	—	—
o-isomer	88-72-2	2 ppm	4 ppm	—	X
m-isomer	98-08-2	2 ppm	4 ppm	—	X
p-isomer	99-99-0	2 ppm	4 ppm	—	X
Nitrotrichloromethane (Chloropicrin)	76-06-2	0.1 ppm	0.3 ppm	—	—
Nitrous oxide (Nitrogen oxide)	10024-97-2	50 ppm	75 ppm	—	—
Nonane	111-84-2	200 ppm	250 ppm	—	—
Octachloronaphthalene	2234-13-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Octane	111-65-9	300 ppm	375 ppm	—	—
Oil mist mineral (particulate)	8012-95-1	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Osmium tetroxide (as Os)	20816-12-0	0.0002 ppm	0.0006 ppm	—	—
Oxalic acid	144-62-7	1 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	—	—
Oxygen difluoride	7783-41-7	—	—	0.05 ppm	—
Ozone	10028-15-6	0.1 ppm	0.3 ppm	—	—
Paper fiber (Cellulose)	9004-34-6	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Paraffin wax fume	8002-74-2	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Paraquat	—	—	—	—	—
Respirable fraction	4685-14-7	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
	1910-42-5	—	—	—	—
	2074-50-2	—	—	—	—
Parathion	56-38-2	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Particulate polycyclic aromatic hydrocarbons (benzene soluble fraction) (coal tar pitch volatiles)	65996-93-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Particulates not otherwise regulated	—	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Pentaborane	19624-22-7	0.005 ppm	0.015 ppm	—	—
Pentachloronaphthalene	1321-64-8	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Pentachlorophenol	87-86-5	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Pentaerythritol	115-77-5	—	—	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Pentane	109-66-0	600 ppm	750 ppm	—	—
2-Pentanone (methyl propyl ketone)	107-87-9	200 ppm	250 ppm	—	—
Perchloroethylene (tetrachloroethylene)	127-18-4	25 ppm	38 ppm	—	—
Perchloromethyl mercaptan	594-42-3	0.1 ppm	0.3 ppm	—	—
Perchloryl fluoride	7616-94-6	3 ppm	6 ppm	—	—
Perlite	—	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Petroleum distillates (Naptha, rubber solvent)	—	100 ppm	150 ppm	—	—
Phenacyl chloride (a-Chloroacetophenone)	532-21-4	0.05 ppm	0.15 ppm	—	—
Phenol	108-95-2	5 ppm	10 ppm	—	X
Phenothiazine	92-84-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	X
p-Phenylene diamine	106-50-3	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Phenyl ether (vapor)	101-84-8	1 ppm	3 ppm	—	—
Phenyl ether-diphenyl mixture (vapor)	—	1 ppm	3 ppm	—	—
Phenylethylene (Styrene)	100-42-5	50 ppm	100 ppm	—	—
Phenyl glycidyl ether (PGE)	122-60-1	1 ppm	3 ppm	—	—
Phenyldiazine	100-63-0	5 ppm	10 ppm	—	X
Phenyl mercaptan	108-98-5	0.5 ppm	1.5 ppm	—	—
Phenylphosphine	638-21-1	—	—	0.05 ppm	—
Phorate	298-02-2	0.05 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>	—	X
Phosdrin (Mevinphos)	7786-34-7	0.01 ppm	0.03 ppm	—	X
Phosgene (carbonyl chloride)	75-44-5	0.1 ppm	0.3 ppm	—	—
Phosphine	7803-51-2	0.3 ppm	1 ppm	—	—
Phosphoric acid	7664-38-2	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Phosphorus (yellow)	7723-14-0	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Phosphorous oxychloride	10025-87-3	0.1 ppm	0.3 ppm	—	—
Phosphorus pentachloride	10026-13-8	0.1 ppm	0.3 ppm	—	—
Phosphorus pentasulfide	1314-80-3	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Phosphorus trichloride	12-2-19	0.2 ppm	0.5 ppm	—	—
Phthalic anhydride	85-44-9	1 ppm	3 ppm	—	—
m-Phthalodinitrile	626-17-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Picloram	1918-02-1	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Picric acid (2, 4, 6-Trinitrophenol)	88-89-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Pindone (2-Pivalyl-1, 3-indandione, Pival)	83-26-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Piperazine dihydrochloride	142-64-3	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Pival (Pindone)	83-26-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Plaster of Paris	26499-65-0	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Platinum (as Pt)	7440-06-4	—	—	—	—
Metal	—	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Soluble salts	—	0.002 mg/m <sup>3</sup>	0.006 mg/m <sup>3</sup>	—	—
Polychlorobiphenyls (Chlorodiphenyls)	—	—	—	—	—
42% Chlorine (PCB)	53469-21-9	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
54% Chlorine (PCB)	11097-69-1	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Portland cement	65997-15-1	—	—	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Potassium hydroxide	1310-58-3	—	—	2 mg/m <sup>3</sup>	—
Propane	74-98-6	1,000 ppm	1,250 ppm	—	—
Propargyl alcohol	107-19-7	1 ppm	3 ppm	—	X
beta-Propiolactone	57-57-8	—	—	—	—
Propionic acid	79-09-4	10 ppm	20 ppm	—	—
Propoxur (Baygon)	114-26-1	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	—
n-Propyl acetate	109-60-4	200 ppm	250 ppm	—	—
n-Propyl alcohol	71-23-8	200 ppm	250 ppm	—	X
n-Propyl nitrate	627-13-4	25 ppm	40 ppm	—	—
Propylene	—	Simple asphyxiant	—	—	—
Propylene dichloride (1, 2-Dichloropropane)	78-87-5	75 ppm	110 ppm	—	—
Propylene glycol dinitrate	6423-43-4	0.05 ppm	0.15 ppm	—	X
Propylene glycol monomethyl ether	107-98-2	100 ppm	150 ppm	—	—
Propylene imine	75-55-8	2 ppm	4 ppm	—	X
Propylene oxide (1,2-Epoxypropane)	75-56-9	20 ppm	30 ppm	—	—
Propyne (Methyl acetylene)	74-99-7	1,000 ppm	1,250 ppm	—	—
Pyrethrum	8003-34-7	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Pyridine	110-86-1	5 ppm	10 ppm	—	—
Pyrocatechol (Catechol)	120-80-9	5 ppm	10 ppm	—	X
Quinone (p-Benzoquinone)	106-51-4	0.1 ppm	0.3 ppm	—	—
RDX (Cyclonite)	—	1.5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
Resorcinol	108-46-3	10 ppm	20 ppm	—	—
Rhodium (as Rh)	7440-16-6	—	—	—	—
Insoluble compounds, metal fumes and dusts	—	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Soluble compounds, salts	—	0.001 mg/m <sup>3</sup>	0.003 mg/m <sup>3</sup>	—	—
Ronnel	299-84-3	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Rosin core solder, pyrolysis products (as formaldehyde)	8050-09-7	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Rotenone	83-79-4	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Rouge	—	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Rubber solvent (naphtha)	8030-30-6	100 ppm	150 ppm	—	—
Selenium compounds (as Se)	7782-49-2	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
Selenium hexafluoride (as Se)	7783-79-1	0.05 ppm	0.15 ppm	—	—
Sesone (Crag herbicide)	136-78-7	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Sevin (Carbaryl)	63-25-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Silane (see Silicon tetrahydride)	7803-62-5	5 ppm	10 ppm	—	—
Silica, amorphous, precipitated and gel	112926-00-8	6 mg/m <sup>3</sup>	12 mg/m <sup>3</sup>	—	—
Silica, amorphous, diatomaceous earth, containing less than 1% crystalline silica	61790-53-2	—	—	—	—
Total particulate	—	6 mg/m <sup>3</sup>	12 mg/m <sup>3</sup>	—	—
Respirable fraction	—	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	—
Silica, crystalline cristobalite	—	—	—	—	—
Respirable fraction	14464-46-1	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	—
Applies where the exposure limit in chapter 296-840 WAC is not in effect.					
Silica, crystalline quartz	—	—	—	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Respirable fraction Applies where the exposure limit in chapter 296-840 WAC is not in effect.	14808-60-7	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Silica, crystalline tripoli (as quartz)	—	—	—	—	—
Respirable fraction	1317-95-9	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Silica, crystalline tridymite	—	—	—	—	—
Respirable fraction Applies where the exposure limit in chapter 296-840 WAC is not in effect.	15468-32-3	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	—
Silica, fused	—	—	—	—	—
Respirable fraction	60676-86-0	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Silicates (less than 1% crystalline silica )	—	—	—	—	—
Mica	—	—	—	—	—
Respirable fraction	12001-26-2	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	—
Soapstone	—	—	—	—	—
Total particulate	—	6 mg/m <sup>3</sup>	12 mg/m <sup>3</sup>	—	—
Respirable fraction	—	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	—
Talc (containing asbestos)	—	—	—	—	—
Talc (containing no asbestos)	—	—	—	—	—
Respirable fraction	14807-96-6	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Tremolite	—	—	—	—	—
Silicon	7440-21-3	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Silicon carbide	409-21-2	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Silicon tetrahydride (Silane)	7803-62-5	5 ppm	10 ppm	—	—
Silver, metal dust and soluble compounds (as Ag)	7440-22-4	0.01 mg/m <sup>3</sup>	0.03 mg/m <sup>3</sup>	—	—
Soapstone	—	—	—	—	—
Total particulate	—	6 mg/m <sup>3</sup>	12 mg/m <sup>3</sup>	—	—
Respirable fraction	—	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	—
Sodium azide (as HN <sub>3</sub> or NaN <sub>3</sub> )	26628-22-8	—	—	0.1 ppm	X
Sodium bisulfite	7631-90-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Sodium-2, 4-dichloro-phenoxyethyl sulfate (Crag herbicide)	136-78-7	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Sodium fluoroacetate	62-74-8	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	X
Sodium hydroxide	1310-73-2	—	—	2 mg/m <sup>3</sup>	—
Sodium metabisulfite	7681-57-4	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Starch	9005-25-8	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Stibine	7803-52-3	0.1 ppm	0.3 ppm	—	—
Stoddard solvent	8052-41-3	100 ppm	150 ppm	—	—
Strychnine	57-24-9	0.15 mg/m <sup>3</sup>	0.45 mg/m <sup>3</sup>	—	—
Styrene (Phenylethylene, Vinyl benzene)	100-42-5	50 ppm	100 ppm	—	—
Subtilisins	9014-01-1	—	0.00006 mg/m <sup>3</sup> (60 min.)	—	—
Sucrose	57-50-1	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Sulfotep (TEDP)	3689-24-5	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Sulfur dioxide	7446-09-5	2 ppm	5 ppm	—	—
Sulfur hexafluoride	2551-62-4	1,000 ppm	1,250 ppm	—	—
Sulfuric acid	7664-93-9	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Sulfur monochloride	10025-67-9	—	—	1 ppm	—
Sulfur pentafluoride	5714-22-1	—	—	0.01 ppm	—
Sulfur tetrafluoride	7783-60-0	—	—	0.1 ppm	—
Sulfuryl fluoride	2699-79-8	5 ppm	10 ppm	—	—
Sulprofos	35400-43-2	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Systox (Demeton)	8065-48-3	0.01 ppm	0.03 ppm	—	X
2, 4, 5-T	93-76-5	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Talc (containing asbestos)	—	—	—	—	—
Talc (containing no asbestos)	—	—	—	—	—
Respirable fraction	14807-96-6	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Tantalum	—	—	—	—	—
Metal and oxide dusts	7440-25-7	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
TDI (Toluene-2, 4-diisocyanate)	584-84-9	0.005 ppm	0.02 ppm	—	—
TEDP (Sulfotep)	3689-24-5	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	X
Tellurium and compounds (as Te)	13494-80-9	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Tellurium hexafluoride (as Te)	7783-80-4	0.02 ppm	0.06 ppm	—	—
Temephos (Abate)	3383-96-8	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
TEPP	107-49-3	0.004 ppm	0.012 ppm	—	X
Terphenyls	26140-60-3	—	—	0.5 ppm	—
1, 1, 1, 2-Tetrachloro-2, 2-difluoroethane	76-11-0	500 ppm	625 ppm	—	—
1, 1, 2, 2-Tetrachloro-1, 2-difluoroethane	76-12-0	500 ppm	625 ppm	—	—
1, 1, 2, 2-Tetrachloroethane	79-34-5	1 ppm	3 ppm	—	X
Tetrachloroethylene (Perchloroethylene)	127-18-4	25 ppm	38 ppm	—	—
Tetrachloromethane (Carbon tetrachloride)	56-23-5	2 ppm	4 ppm	—	X
Tetrachloronaphthalene	1335-88-2	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	X
Tetraethyl lead (as Pb)	78-00-2	0.075 mg/m <sup>3</sup>	0.225 mg/m <sup>3</sup>	—	X
Tetrahydrofuran	109-99-9	200 ppm	250 ppm	—	—
Tetramethyl lead (as Pb)	75-74-1	0.075 mg/m <sup>3</sup>	0.225 mg/m <sup>3</sup>	—	X
Tetramethyl succinonitrile	3333-52-6	0.5 ppm	1.5 ppm	—	X
Tetranitromethane	509-14-8	1 ppm	3 ppm	—	—
Tetrasodium pyrophosphate	7722-88-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Tetryl (2, 4, 6-trinitrophenyl-methylnitramine)	479-45-8	1.5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
Thallium (soluble compounds) (as Tl)	7440-28-0	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
4, 4-Thiobis (6-tert-butyl-m-cresol)	96-69-5	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Thiodan (Endosulfan)	115-29-7	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Thioglycolic acid	68-11-1	1 ppm	3 ppm	—	X
Thionyl chloride	7719-09-7	—	—	1 ppm	—
Thiram	137-26-8	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Tin (as Sn)	—	—	—	—	—
Inorganic compounds	7440-31-5	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—
Tin (as Sn)	—	—	—	—	—
Organic compounds	7440-31-5	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Tin oxide (as Sn)	21651-19-4	2 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	—	—

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Titanium dioxide	13463-67-7	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
TNT (2, 4, 6-Trinitrotoluene)	118-96-7	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Toluene	108-88-3	100 ppm	150 ppm	—	—
Toluene-2, 4-diisocyanate (TDI)	584-84-9	0.005 ppm	0.02 ppm	—	—
m-Toluidine	108-44-1	2 ppm	4 ppm	—	X
o-Toluidine	95-53-4	2 ppm	4 ppm	—	X
p-Toluidine	106-49-0	2.0 ppm	4 ppm	—	X
Toxaphene (Chlorinated camphene)	8001-35-2	0.5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	—	X
Tremolite	—	—	—	—	—
Tributyl phosphate	126-73-8	0.2 ppm	0.6 ppm	—	—
Trichloroacetic acid	76-03-9	1 ppm	3 ppm	—	—
1, 2, 4-Trichlorobenzene	120-82-1	—	—	5 ppm	—
1, 1, 1-Trichloroethane (Methyl chloroform)	71-55-6	350 ppm	450 ppm	—	—
1, 1, 2-Trichloroethane	79-00-5	10 ppm	20 ppm	—	—
Trichloroethylene	79-01-6	50 ppm	200 ppm	—	—
Trichlorofluoromethane (Fluorotrichloromethane)	75-69-4	—	—	1,000 ppm	—
Trichloromethane (Chloroform)	67-66-3	2 ppm	4 ppm	—	—
Trichloronaphthalene	1321-65-9	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	X
1, 2, 3-Trichloropropane	96-18-4	10 ppm	20 ppm	—	X
1, 1, 2-Trichloro-1, 2, 2-trifluoroethane	76-13-1	1,000 ppm	1,250 ppm	—	—
Tricyclohexyltin hydroxide (Cyhexatin)	13121-70-5	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Triethylamine	121-44-8	10 ppm	15 ppm	—	—
Trifluorobromomethane	75-63-8	1,000 ppm	1,250 ppm	—	—
Trimellitic anhydride	552-30-7	0.005 ppm	0.015 ppm	—	—
Trimethylamine	75-50-3	10 ppm	15 ppm	—	—
Trimethyl benzene	25551-13-7	25 ppm	38 ppm	—	—
Trimethyl phosphite	121-45-9	2 ppm	4 ppm	—	—
2, 4, 6-Trinitrophenol (Picric acid)	88-89-1	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
2, 4, 6-Trinitrophenyl-methylnitramine (Tetryl)	479-45-8	1.5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	X
2, 4, 6-Trinitrotoluene (TNT)	118-96-7	0.5 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	—	X
Triorthoocresyl phosphate	78-30-8	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	X
Triphenyl amine	603-34-9	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Triphenyl phosphate	115-86-6	3 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	—	—
Tungsten (as W)	7440-33-7	—	—	—	—
Soluble compounds	—	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Insoluble compounds	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Turpentine	8006-64-2	100 ppm	150 ppm	—	—
Uranium (as U)	7440-61-1	—	—	—	—
Soluble compounds	—	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	—
Insoluble compounds	—	0.2 mg/m <sup>3</sup>	0.6 mg/m <sup>3</sup>	—	—
n-Valeraldehyde	110-62-3	50 ppm	75 ppm	—	—
Vanadium (as V2O5)	—	—	—	—	—
Respirable fraction	1314-62-1	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	—	—
Vegetable oil mist	—	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Vinyl acetate	108-05-1	10 ppm	20 ppm	—	—
Vinyl benzene (Styrene)	100-42-5	50 ppm	100 ppm	—	—
Vinyl bromide	593-60-2	5 ppm	10 ppm	—	—
Vinyl chloride (Chloroethylene)	75-01-4	1 ppm	5 ppm	—	—
Vinyl cyanide (Acrylonitrile)	107-13-1	2 ppm	10 ppm	—	—
Vinyl cyclohexene dioxide	106-87-6	10 ppm	20 ppm	—	X

Substance	CAS	TWA <sub>8</sub>	STEL	Ceiling	Skin
Vinyl toluene	25013-15-4	50 ppm	75 ppm	—	—
Vinylidene chloride (1, 1-Dichloroethylene)	75-35-4	1 ppm	3 ppm	—	—
VM & P Naphtha	8032-32-4	300 ppm	400 ppm	—	—
Warfarin	81-81-2	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	—	—
Welding fumes (total particulate)	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Wood dust	—	—	—	—	—
Nonallergenic; (All woods except allergenic)	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Allergenic (e.g. cedar, mahogany and teak)	—	2.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	—	—
Xylenes (ortho, meta, and para isomers) (Dimethylbenzene)	1330-20-7	100 ppm	150 ppm	—	—
m-Xylene alpha, alpha-diamine	1477-55-0	—	—	0.1 mg/m <sup>3</sup>	X
Xylidine (Dimethylaminobenzene)	1300-73-8	2 ppm	4 ppm	—	X
Yttrium	7440-65-5	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	—	—
Zinc chloride fume	7646-85-7	1 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	—	—
Zinc chromate (as CrO <sub>3</sub> )	Varies with compound	0.05 mg/m <sup>3</sup>	—	0.1 mg/m <sup>3</sup>	—
Zinc oxide	1314-13-2	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m	—	—
Zinc oxide fume	1314-13-2	5 mg/g <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Zinc stearate	557-05-1	—	—	—	—
Total particulate	—	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	—	—
Respirable fraction	—	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—
Zirconium compounds (as Zr)	7440-67-2	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	—	—

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