## Ambient air toxicity values used by MPCA

Updated February 22, 2019

All values in units of *ug/m3*.

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
75-07-0	Acetaldehyde	470	CAL EPA	5	HRV	9	IRIS
60-35-5	Acetamide			0.5	CAL EPA		
75-86-5	Acetone Cyanohydrin					2	PPRTV
75-05-8	Acetonitrile					60	HRV
107-02-8	Acrolein	5	HBV			0.4	HBV
79-06-1	Acrylamide			0.1	IRIS	6	IRIS
79-10-7	Acrylic acid	6000	CAL EPA			1	IRIS
107-13-1	Acrylonitrile			0.1	HRV	2	IRIS
111-69-3	Adiponitrile					6	PPRTV
00-07-9	Aldehydes	94	HRV	2	MDH	0.08	CAL EPA
309-00-2	Aldrin			0.002	IRIS		
VARIOUS	Aliphatic Hydrocarbon Streams (Midrange)			0.0022	PPRTV	100	PPRTV
75-85-4	Amyl Alcohol, tert-						
107-05-1	Allyl chloride			1.7	CAL EPA	1	IRIS
7429-90- 5	Aluminum					5	PPRTV
117-79-3	Aminoanthraquinone, 2-			1.1	CAL EPA		
7664-41- 7	Ammonia	3200	HRV			80	HRV
62-53-3	Aniline			6.3	CAL EPA	1	IRIS
191-26-4	Anthanthrene			0.0251	MDH		
7440-36- 0	Antimony					0.2	HRV
0-00-1	Antimony Compounds					0.2	HRV

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
1309-64- 4	Antimony trioxide					0.2	HRV
140-57-8	Aramite			1.4	IRIS		
7440-38- 2	Arsenic	0.2	CAL EPA	0.002	HRV	0.015	CAL EPA
0-00-2	Arsenic Compounds	0.2	CAL EPA	0.002	HRV	0.015	CAL EPA
1327-53- 3	Arsenic Trioxide	0.2	CAL EPA	0.002	HRV	0.015	CAL EPA
7784-42- 1	Arsine	200	HRV			0.05	IRIS
123-77-3	Azodicarbonamide					0.007	PPRTV
71-43-2	Benzene	1000	HRV	1.3	HRV	30	IRIS
92-87-5	Benzidine			2e-04	HRV		
202-94-8	11H- Benz[b,c]aceanthrylene			0.2008	HRV		
199-54-2	Benz[e]aceanthrylene			0.0126	MDH		
202-33-5	Benz[j]aceanthrylene			2e-04	MDH		
211-91-6	Benz[l]aceanthrylene			0.002	MDH		
205-82-3	Benzo(j)fluoranthene			0.0335	MDH		
207-08-9	Benzo(k)fluoranthene			0.3347	MDH		
56-55-3	Benzo[a]anthracene			0.0502	MDH		
50-32-8	Benzo[a]pyrene			0.01	MDH		
205-99-2	Benzo[b]fluoranthene			0.0126	MDH		
205-12-9	Benzo[c]fluorene			5e-04	MDH		
191-24-2	Benzo[g,h,i]perylene			1.1156	MDH		
100-44-7	Benzyl chloride	240	CAL EPA	0.2	CAL EPA	1	PPRTV
7440-41- 7	Beryllium			0.004	HRV	0.02	IRIS
0-00-3	Beryllium Compounds			0.004	HRV	0.02	IRIS

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
117-81-7	Bis(2-ethylhexyl)phthalate (DEHP)			4.2	CAL EPA		
542-88-1	Bis(chloromethyl)ether			2e-04	HRV		
10294- 34-5	Boron Trichloride					20	PPRTV
108-86-1	Bromobenzene					60	IRIS
74-97-5	Bromochloromethane						
75-25-2	Bromoform			9.1	IRIS		
74-83-9	Bromomethane	2000	HRV			5	HRV
106-94-5	Bromopropane, 1-	50000	HBV			20	HBV
106-99-0	Butadiene, 1,3-	660	CAL EPA	0.2	HBV	2	IRIS
78-92-2	Butyl alcohol, sec-					30000	PPRTV
111-76-2	Butyl Cellosolve (ethylene glycol monobutyl ether)	14000	CAL EPA			13000	HRV
7440-43- 9	Cadmium			0.006	HRV	0.02	CAL EPA
0-00-4	Cadmium Compounds			0.006	HRV	0.02	CAL EPA
105-60-2	Caprolactum	50	CAL EPA			2.2	CAL EPA
75-15-0	Carbon disulfide	6000	HRV			700	HRV
630-08-0	Carbon Monoxide	23000	CAL EPA				
56-23-5	Carbon tetrachloride	1900	CAL EPA	1.7	IRIS	100	IRIS
463-58-1	Carbonyl sulfide	660	CAL EPA			100	PPRTV
111-15-9	Cellosolve Acetate (ethylene glycol monoethyl ether acetate)	100	HRV			300	CAL EPA
1306-38- 3	Cerium Oxide and Cerium Compounds					0.9	IRIS
12789- 03-6	Chlordane or (57-74-9)			0.1	IRIS	0.7	IRIS
108171- 26-2	Chlorinated Paraffins (C12, 60% Chlorine)			0.4	CAL EPA		

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	cancer chronic air reference
7782-50- 5	Chlorine	290	HRV			0.2	CAL EPA
10049- 04-4	Chlorine Oxide (CLO2)					0.2	IRIS
75-68-3	Chloro-1,1-difluoroethane, 1- (HCFC-142b)					50000	IRIS
532-27-4	Chloroacetophenone, 2-					0.03	HRV
108-90-7	Chlorobenzene					1000	CAL EPA
98-56-6	Chlorobenzotrifluoride, 4-					300	PPRTV
75-45-6	Chlorodifluoromethane (HCFC-22)					50000	IRIS
67-66-3	Chloroform	150	HRV	0.43	IRIS	300	CAL EPA
88-73-3	Chloronitrobenzene, o-						
100-00-5	Chloronitrobenzene, p-					2	PPRTV
95-83-0	Chloro-o- phenylenediamine, 4-			2.2	CAL EPA		
95-69-2	Chloro-o-toluidine, p-			0.13	CAL EPA		
76-06-2	Chloropicrin	29	CAL EPA			0.4	CAL EPA
126-99-8	Chloroprene			0.033	IRIS	20	IRIS
7440-47- 3	Chromium			8e-04	HRV	0.008	IRIS
18540- 29-9	Chromic acid mists and dissolved Cr(VI) aerosols			8e-04	HRV	0.008	IRIS
18540- 29-9	Chromium (Hexavalent) (particulate)			8e-04	HRV	0.1	IRIS
0-00-5	Chromium Compounds			8e-04	HRV	0.008	IRIS
218-01-9	Chrysene (Benzo(a)phenanthrene)			0.1004	MDH		
8007-45- 2	Coal Tar			0.02	HRV		
7440-48- 4	Cobalt			0.0011	PPRTV	0.006	PPRTV

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0-00-7	Coke Oven Emissions			0.02	HRV		
7440-50- 8	Copper	100	CAL EPA				
00-03-1	Copper Compounds	100	CAL EPA				
120-71-8	Cresidine, p-			0.23	CAL EPA		
108-39-4	Cresol, m-					600	CAL EPA
95-48-7	Cresol, o-					600	CAL EPA
106-44-5	Cresol, p-					600	CAL EPA
1319-77- 3	Cresols/Cresylic acid (isomers and mixture)					600	CAL EPA
98-82-8	Cumene					400	IRIS
135-20-6	Cupferron			0.16	CAL EPA		
57-12-5	Cyanide (Cyanide ion, Inorganic cyanides, Isocyanide)	700	HRV			3	HRV
0-00-8	Cyanide Compounds	700	HRV			3	HRV
110-82-7	Cyclohexane					6000	IRIS
109-94-1	Cyclohexanone					700	PPRTV
27208- 37-3	Cyclopenta[c,d]pyrene			0.0251	MDH		
202-98-2	4H- Cyclopenta[d,e,f]chrysene			0.0335	MDH		
50-29-3	DDT			0.1	IRIS		
615-05-4	Diaminoanisole, 2,4-			1.5	CAL EPA		
103-33-3	Diazene, Diphenyl			0.32	IRIS		
226-36-8	Dibenz(a,h)acridine			0.1004	MDH		
224-42-0	Dibenz(a,j)acridine			0.1004	MDH		
53-70-3	Dibenz[a,h]anthracene			0.001	MDH		
5385-75- 1	Dibenzo[a,e]fluoranthene			0.0112	MDH		

Non-

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	cancer chronic air reference
192-65-4	Dibenzo(a,e)pyrene			0.0251	MDH		
189-64-0	Dibenzo(a,h)pyrene			0.0112	MDH		
191-30-0	Dibenzo(a,l)pyrene			3e-04	MDH		
194-59-2	Dibenzo(c,g)carbazole, 7H-			0.01	MDH		
189-55-9	Dibenzo[a,i]pyrene			0.0167	MDH		
96-12-8	Dibromo-3-chloropropane, 1,2-			0.005	CAL EPA	0.2	IRIS
106-46-7	Dichlorobenzene(p), 1,4-			0.91	CAL EPA	800	IRIS
25321- 22-6	Dichlorobenzenes			0.91	CAL EPA	800	IRIS
91-94-1	Dichlorobenzidene, 3,3-			0.029	CAL EPA		
764-41-0	Dichloro-2-butene, 1,4-			0.0024	PPRTV		
1476-11- 5	Dichloro-2-butene, cis-1,4-			0.0024	PPRTV		
75-71-8	Dichlorodifluoromethane (CFC-12)						
111-44-4	Dichloroethyl ether (Bis(2-chloroethyl)ethe			0.03	IRIS		
75-35-4	Dichloroethylene (1,1-) (Vinylidene chloride)					200	IRIS
156-60-5	Dichloroethylene, trans-1,2-						
542-75-6	Dichloropropene, 1,3-			2.5	IRIS	20	HRV
62-73-7	Dichlorvos					0.5	HRV
77-73-6	Dicyclopentadiene						
60-57-1	Dieldrin			0.0022	IRIS		
0-02-4	Diesel exhaust particulate					5	HRV
111-42-2	Diethanolamine					3	CAL EPA
112-34-5	Diethylene Glycol Monobutyl Ether					0.1	PPRTV
111-90-0	Diethylene Glycol Monoethyl Ether					0.3	PPRTV

Non-

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
75-37-6	Difluoroethane, 1,1-					40000	IRIS
108-20-3	Diisopropyl Ether					700	PPRTV
60-11-7	Dimethyl aminoazobenzene			0.0077	CAL EPA		
68-12-2	Dimethyl formamide					30	HRV
108-01-0	Dimethylamino ethanol, 2-						
57-97-6	Dimethylbenz[a]anthracene, 7,12-						
57-14-7	Dimethylhydrazine, 1,1-						
42397- 64-8	Dinitropyrene, 1,6- (BaP)			0.001	MDH		
42397- 65-9	Dinitropyrene, 1,8- (BaP)			0.01	MDH		
121-14-2	Dinitrotoluene, 2,4-			0.11	CAL EPA		
123-91-1	Dioxane, 1,4- (1,4- Diethylene dioxide)	3000	HRV	2	IRIS	30	IRIS
122-66-7	Diphenylhydrazine, 1,2-			0.045	IRIS		
106-89-8	Epichlorohydrin (I-Chloro- 2,3-epoxypropane)	1300	CAL EPA	8	HRV	1	IRIS
106-88-7	Epoxybutane, 1,2-					20	HRV
141-78-6	Ethyl acetate					70	PPRTV
140-88-5	Ethyl Acrylate					8	PPRTV
110-80-5	Ethoxyethanol, 2- (ethylene glycol monoethyl ether)	400	HRV			200	IRIS
100-41-4	Ethyl benzene	10000	HRV	4	CAL EPA	1000	IRIS
51-79-6	Ethyl carbamate (Urethane)			0.034	CAL EPA		
75-00-3	Ethyl chloride (Chloroethane)	1e+05	HRV			10000	IRIS
97-63-2	Ethyl Methacrylate					300	PPRTV
106-93-4	Ethylene dibromide (Dibromoethane)			0.05	HRV	9	IRIS

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107-06-2	Ethylene dichloride (1,2- Dichloroethane)			0.38	IRIS	400	CAL EPA
107-21-1	Ethylene glycol					400	CAL EPA
75-21-8	Ethylene oxide			0.0033	IRIS	30	CAL EPA
96-45-7	Ethylene thiourea			0.77	CAL EPA		
75-34-3	Ethylidene dichloride (1,1- Dichloroethane)			6.3	CAL EPA		
206-44-0	Fluoranthene			0.1255	MDH		
1101	Fluorides (except hydrogen fluoride)					13	CAL EPA
50-00-0	Formaldehyde	94	HRV	2	MDH	9	CAL EPA
64-18-6	Formic Acid						
111-30-8	Glutaraldehyde					0.08	CAL EPA
0-01-2	Glycol ethers	90	HRV			20	IRIS
76-44-8	Heptachlor			0.0077	IRIS		
1024-57- 3	Heptachlor epoxide			0.0038	IRIS		
00-08-5	Heptachlorodibenzodioxin, All Isomers			0	MPCA	0.004	MPCA
67562- 39-4	Heptachlorodibenzofuran, 1,2,3,4,6,7,8-			0	MPCA	0.004	MPCA
55673- 89-7	Heptachlorodibenzofuran, 1,2,3,4,7,8,9-			0	MPCA	0.004	MPCA
00-08-4	Heptachlorodibenzofuran, All Isomers			0	MPCA	0.004	MPCA
35822- 46-9	Heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8-			0	MPCA	0.004	MPCA
142-82-5	Heptane, N					400	PPRTV
118-74-1	Hexachlorobenzene			0.022	IRIS		
87-68-3	Hexachlorobutadiene			0.45	IRIS		
608-73-1	Hexachlorocyclohexane (technical grade)			0.02	IRIS		

319-84-6         Hexachlorocyclohexane, alpha-         0.0056         IRIS           319-85-7         Hexachlorocyclohexane, beta-1,2,3,4,56-         0.019         IRIS           77-47-4         Hexachlorocyclopentadiene         0.01         MPCA         4e-04         MPCA           00-08-3         Hexachlorodibenzofuran, 1,23,4,78-         0.0         MPCA         4e-04         MPCA           26-9-3         Hexachlorodibenzofuran, 1,23,4,78-         0.0         MPCA         4e-04         MPCA           7918-1         Hexachlorodibenzofuran, 1,23,7,89-         0.0         MPCA         4e-04         MPCA           21-9-1         Hexachlorodibenzofuran, 1,23,4,7,8-         0.0         MPCA         4e-04         MPCA           39227- Hexachlorodibenzofuran, 2,3,4,7,8-         0.0         MPCA         7171         MPCA           39227- Hexachlorodibenzo-p- dioxin, 1,2,3,4,7,8-         0.0         MPCA         4e-04         MPCA           39247- Hexachlorodibenzo-p- dioxin, 1,2,3,7,8-9-         0.0         MPCA         4e-04         MPCA           39247- Hexachlorodibenzo-p- dioxin, 1,2,3,7,8-9-         0.0         MPCA         4e-04         MPCA           39248- Hexachlorodibenzo-p- dioxin, 1,2,3,7,8-9-         0.0         MPCA         30         IRIS     <	CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
beta-1,2,3,4,5,6-         77-47-4         Hexachlorocyclopentadiene         0.2         IRIS           00-08-3         Hexachlorodibenzofuran, All Isomers         0         MPCA         4e-04         MPCA           70648- 26-9         Hexachlorodibenzofuran, 1,2,3,47,8-         0         MPCA         4e-04         MPCA           57117- 44-9         Hexachlorodibenzofuran, 1,2,3,67,8-         0         MPCA         4e-04         MPCA           72918- 12,3,78,9-         Hexachlorodibenzofuran, 2,3,4,67,8-         0         MPCA         4e-04         MPCA           60851- 34-5         Hexachlorodibenzofuran, 2,3,4,67,8-         0         MPCA         4e-04         MPCA           90-08-2         Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-         0         MPCA         4e-04         MPCA           85-7         Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-         0         IRIS         4e-04         MPCA           85-7         Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-         0         IRIS         4e-04         MPCA           86-7-7         Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-         0         IRIS         4e-04         MPCA           86-7-7         Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-         0         IRIS         30         IRIS	319-84-6				0.0056	IRIS		
Nexachlorodibenzofuran,	319-85-7	-			0.019	IRIS		
All Isomers	77-47-4	Hexachlorocyclopentadiene					0.2	IRIS
26-9       1,2,3,4,7,8-         57117- 44-9       Hexachlorodibenzofuran, 1,2,3,6,7,8-       0       MPCA       4e-04       MPCA         72918- 21-9       Hexachlorodibenzofuran, 1,2,3,7,8,9-       0       MPCA       4e-04       MPCA         60851- 34-5       Hexachlorodibenzofuran, 2,3,4,6,7,8-       0       MPCA       4e-04       MPCA         00-08-2       Hexachlorodibenzofurans, All Isomers       0       MPCA       4e-04       MPCA         39227- 28-6       Hexachlorodibenzo-p- dioxin, 1,2,3,4,7,8-       0       MPCA       4e-04       MPCA         85-7       Hexachlorodibenzo-p- dioxin, 1,2,3,6,7,8-       0       IRIS       4e-04       MPCA         85-7       Hexachlorodibenzo-p- dioxin, 1,2,3,6,7,8-       0       IRIS       4e-04       MPCA         67-72-1       Hexachlorodibenzo-p- dioxin, 1,2,3,6,7,8-       0       IRIS       30       IRIS         822-06-0       Hexamethylene-1,6- diisocyanate       50       PPRTV       2000       HRV         591-78-6       Hexanone-2       0.002       HRV       0.2       CAL EPA         10034- 93-2       Hydrazine sulfate       0.002       HRV       20       HRV	00-08-3				0	MPCA	4e-04	MPCA
44-9       1,2,3,6,7,8-         72918- 21-9       Hexachlorodibenzofuran, 1,2,3,7,8,9-       0       MPCA       4e-04       MPCA         60851- 34-5       Hexachlorodibenzofuran, 2,3,4,6,7,8-       0       MPCA       4e-04       MPCA         00-08-2       Hexachlorodibenzofurans, All Isomers       0       MPCA       7171       MPCA         39227- 28-6       Hexachlorodibenzo-p- dioxin, 1,2,3,4,7,8-       0       IRIS       4e-04       MPCA         57653- 85-7       Hexachlorodibenzo-p- dioxin, 1,2,3,6,7,8-       0       IRIS       4e-04       MPCA         67-72-1       Hexachlorodibenzo-p- dioxin, 1,2,3,7,8-9-       0       IRIS       4e-04       MPCA         822-06-0       Hexamethylene-1,6- diisocyanate       50       PPRTV       2000       HRV         591-78-6       Hexanne       50       PPRTV       2000       HRV         591-78-6       Hexanne-2       0.002       HRV       0.2       CAL EPA         10034- 93-2       Hydrazine sulfate       0.002       HRV       20       HRV         7647-01- 0       Hydrochloric acid (hydrogen chloride)       2700       HRV       20       HRV					0	MPCA	4e-04	MPCA
21-9       1,2,3,7,8,9-         60851-34-5       Hexachlorodibenzofuran, 2,3,4,6,7,8-       0       MPCA       4e-04       MPCA         00-08-2       Hexachlorodibenzofurans, All Isomers       0       MPCA       7171       MPCA         39227-28-6       Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-       0       MPCA       4e-04       MPCA         57653-85-7       Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-       0       IRIS       4e-04       MPCA         19408-74-3       Hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9-       0       IRIS       4e-04       MPCA         67-72-1       Hexamethylene-1,6-diisocyanate       2.5       IRIS       30       IRIS         822-06-0       Hexamethylene-1,6-diisocyanate       50       PPRTV       2000       HRV         591-78-6       Hexanone-2       30       IRIS         302-01-2       Hydrazine       0.002       HRV       0.2       CAL EPA         7647-01-0       Hydrazine sulfate       2700       HRV       WHRV       20       HRV	_				0	MPCA	4e-04	MPCA
34-5       2,3,4,6,7,8-         00-08-2       Hexachlorodibenzofurans, All Isomers       0       MPCA       7171       MPCA         39227-28-6       Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-       0       MPCA       4e-04       MPCA         57653-3-2657-28-7-7-7-8-7-7-7-8-7-7-7-8-7-7-7-8-7-7-7-7-7-7-7-1-7-7-7-7					0	MPCA	4e-04	MPCA
All Isomers         39227- 28-6 dioxin, 1,2,3,4,7,8- dioxin, 1,2,3,4,7,8- dioxin, 1,2,3,4,7,8-       0       MPCA de-04 MPCA de-04 MPCA de-04 MPCA dioxin, 1,2,3,6,7,8-       MPCA dioxin, 1,2,3,6,7,8-         19408- 74-3 dioxin, 1,2,3,7,8,9- dio					0	MPCA	4e-04	MPCA
28-6       dioxin, 1,2,3,4,7,8-         57653- 85-7       Hexachlorodibenzo-p- dioxin, 1,2,3,6,7,8-       0       IRIS       4e-04       MPCA         19408- 74-3       Hexachlorodibenzo-p- dioxin, 1,2,3,7,8,9-       0       IRIS       4e-04       MPCA         67-72-1       Hexachloroethane       2.5       IRIS       30       IRIS         822-06-0       Hexamethylene-1,6- diisocyanate       50       PPRTV       2000       HRV         591-78-6       Hexanone-2       30       IRIS         302-01-2       Hydrazine       0.002       HRV       0.2       CAL EPA         10034- 93-2       Hydrazine sulfate       2700       HRV       4RV       20       HRV	00-08-2				0	MPCA	7171	MPCA
85-7       dioxin, 1,2,3,6,7,8-         19408-74-3       Hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9-       0       IRIS       4e-04       MPCA         67-72-1       Hexachloroethane       2.5       IRIS       30       IRIS         822-06-0       Hexamethylene-1,6-diisocyanate       50       PPRTV       2000       HRV         591-78-6       Hexanone-2       30       IRIS         302-01-2       Hydrazine       0.002       HRV       0.2       CAL EPA         10034-93-2       Hydrazine sulfate       0.002       HRV       20       HRV         7647-01-0       Hydrochloric acid (hydrogen 2700       HRV       HRV       20       HRV					0	MPCA	4e-04	MPCA
74-3       dioxin, 1,2,3,7,8,9-         67-72-1       Hexachloroethane       2.5       IRIS       30       IRIS         822-06-0       Hexamethylene-1,6-diisocyanate       50       PPRTV       2000       HRV         591-78-6       Hexanone-2       30       IRIS         302-01-2       Hydrazine       0.002       HRV       0.2       CAL EPA         10034-93-2       Hydrazine sulfate       0.002       HRV       20       HRV         7647-01-00       Hydrochloric acid (hydrogen 2700       HRV       20       HRV					0	IRIS	4e-04	MPCA
822-06-0       Hexamethylene-1,6-diisocyanate       50       PPRTV       2000       HRV         110-54-3       Hexanone-2       50       PPRTV       2000       HRV         591-78-6       Hexanone-2       30       IRIS         302-01-2       Hydrazine       0.002       HRV       0.2       CAL EPA         10034-93-2       Hydrazine sulfate       0.002       HRV       20       HRV         7647-01-0       Hydrochloric acid (hydrogen 2700       HRV       20       HRV					0	IRIS	4e-04	MPCA
diisocyanate  110-54-3 Hexane 50 PPRTV 2000 HRV  591-78-6 Hexanone-2 30 IRIS  302-01-2 Hydrazine 0.002 HRV 0.2 CAL EPA  10034- 93-2 Hydrochloric acid (hydrogen 2700 HRV  6 HRV 2000 HRV  2000 HRV  2000 HRV  2000 HRV  2000 HRV  2000 HRV  2000 HRV	67-72-1	Hexachloroethane			2.5	IRIS	30	IRIS
591-78-6       Hexanone-2       30       IRIS         302-01-2       Hydrazine       0.002       HRV       0.2       CAL EPA         10034- 93-2       Hydrazine sulfate       0.002       HRV       20       HRV         7647-01- 0       Hydrochloric acid (hydrogen chloride)       2700       HRV       20       HRV	822-06-0						0.01	HRV
302-01-2 Hydrazine	110-54-3	Hexane			50	PPRTV	2000	HRV
10034- Hydrazine sulfate 0.002 HRV 93-2  7647-01- Hydrochloric acid (hydrogen 2700 HRV 20 HRV 20 HRV 20 Chloride)	591-78-6	Hexanone-2					30	IRIS
93-2  7647-01- Hydrochloric acid (hydrogen 2700 HRV 20 HRV 0 chloride)	302-01-2	Hydrazine			0.002	HRV	0.2	CAL EPA
0 chloride)		Hydrazine sulfate			0.002	HRV		
74-90-8 Hydrogen cyanide 700 HRV 3 HRV			2700	HRV			20	HRV
	74-90-8	Hydrogen cyanide	700	HRV			3	HRV

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
7664-39- 3	Hydrogen fluoride (Hydrofluoric acid)	240	HRV			14	CAL EPA
7783-07- 5	Hydrogen selenide	5	CAL EPA				
7783-06- 4	Hydrogen sulfide	42	CAL EPA			2	IRIS
193-39-5	Indeno(1,2,3-cd)pyrene			0.1434	MDH		
78-59-1	Isophorone					2000	CAL EPA
67-63-0	Isopropyl alcohol	3200	CAL EPA			7000	CAL EPA
7439-92- 1	Lead			0.83	CAL EPA	0.15	NAAQS
7758-97- 6	Lead Chromate			8e-04	HRV	0.008	IRIS
0-01-3	Lead Compounds			0.83	CAL EPA	0.15	NAAQS
58-89-9	Lindane (all isomers)			0.032	CAL EPA		
00-07-8	m- and p-Xylenes	43000	HRV			100	IRIS
108-31-6	Maleic anhydride					0.7	CAL EPA
7439-96- 5	Manganese					0.2	HRV
0-01-4	Manganese Compounds					0.2	HRV
1313-13- 9	Manganese Dioxide					0.2	HRV
7439-97- 6	Mercury (elemental)	0.6	CAL EPA			0.3	IRIS
0-02-3	Mercury Compounds	0.6	CAL EPA			0.3	IRIS
126-98-7	Methacrylonitrile					30	PPRTV
67-56-1	Methanol	25000	HRV			20000	IRIS
109-86-4	Methoxyethanol, 2- (ethylene glycol monomethyl ether EGME)	90	HRV			20	IRIS
96-33-3	Methyl acrylate					20	PPRTV

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
74-83-9	Methyl bromide (Bromomethane)	2000	HRV			5	HRV
110-49-6	Methyl Cellosolve Acetate					90	CAL EPA
74-87-3	Methyl chloride (Chloromethane)					90	IRIS
71-55-6	Methyl chloroform (1,1,1- Trichloroethane)	140000	HRV			5000	IRIS
78-93-3	Methyl ethyl ketone (2- Butanone)	10000	HRV			5000	IRIS
60-34-4	Methyl Hydrazine						
108-10-1	Methyl isobutyl ketone (Hexone)					3000	IRIS
624-83-9	Methyl isocyanate					1	CAL EPA
80-62-6	Methyl methacrylate					700	HRV
1634-04- 4	Methyl tert butyl ether			38	CAL EPA	3000	IRIS
56-49-5	Methylcholanthrene, 3-			0.0018	MDH		
3697-24- 3	Methylchrysene, 5-			0.01	MDH		
101-14-4	Methylene bis(2-chloroaniline), 4,4-			0.023	CAL EPA		
74-95-3	Methylene Bromide						
75-09-2	Methylene chloride (Dichloromethane)	10000	HRV	20	HRV	600	IRIS
101-68-8	Methylene diphenyl diisocyanate (MDI)	12	CAL EPA			0.6	HRV
101-77-9	Methylenedianiline, 4,4-			0.022	CAL EPA	20	CAL EPA
90-94-8	Michler's ketone			0.04	CAL EPA		
10595- 95-6	N- Nitrosomethylethylamine			0.0016	CAL EPA		
64724- 95-6	Naphtha, High Flash Aromatic (HFAN)					100	PPRTV
91-20-3	Naphthalene	200	HBV	9	MDH	9	HBV

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
193-09-9	Naphtho[2,3-e]pyrene			0.0335	MDH		
7440-02- 0	Nickel	11	HRV	0.02	HRV	0.014	CAL EPA
0-01-5	Nickel Compounds	11	HRV	0.02	HRV	0.014	CAL EPA
1313-99- 1	Nickel oxide	11	HRV	0.038	CAL EPA	0.02	CAL EPA
0-02-5	Nickel refinery dust from the pyrometallurgical process	11	HRV	0.04	IRIS	0.014	CAL EPA
12035- 72-2	Nickel sulfide (NI3S2)	11	HRV	0.02	HRV	0.014	CAL EPA
7697-37- 2	Nitric acid	130	HRV				
602-87-9	Nitroacenaphthene, 5-			0.502	MDH		
88-74-4	Nitroaniline, 2-						
100-01-6	Nitroaniline, 4-					6	PPRTV
98-95-3	Nitrobenzene			0.25	IRIS	9	IRIS
7496-02- 8	Nitrochrysene, 6-			0.001	MDH		
607-57-8	Nitrofluorene, 2-			1.004	MDH		
10102- 44-0	Nitrogen dioxide (NO2)	470	HBV				
75-52-5	Nitromethane			1.1	PPRTV	5	PPRTV
79-46-9	Nitropropane, 2-					20	HRV
5522-43- 0	Nitropyrene, 1-			0.1004	MDH		
57835- 92-4	Nitropyrene, 4-			0.1004	MDH		
156-10-5	Nitrosodiphenylamine, p-			1.6	CAL EPA		
55-18-5	N-Nitrosodiethylamine			2e-04	IRIS		
62-75-9	N-Nitrosodimethylamine			7e-04	IRIS		
924-16-3	N-Nitrosodi-n-butylamine			0.0062	IRIS		

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
621-64-7	N-Nitrosodi-n-propylamine			0.005	CAL EPA		
86-30-6	N-Nitrosodiphenylamine			3.8	CAL EPA		
59-89-2	N-Nitrosomorpholine			0.0053	CAL EPA		
100-75-4	N-Nitrosopiperidine			0.0037	CAL EPA		
111-84-2	N-Nonane					20	PPRTV
39001- 02-0	Octachlorodibenzofuran, 1,2,3,4,6,7,8,9-			1e-04	MPCA	0.133	MPCA
3268-87- 9	Octachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8,9-			1e-04	MPCA	0.133	MPCA
10028- 15-6	Ozone	180	CAL EPA				
00-08-1	Pentachlorodibenzodioxins, All Isomers			0	MPCA	0	MPCA
57117- 41-6	Pentachlorodibenzofuran, 1,2,3,7,8-			0	MPCA	0.0013	MPCA
57117- 31-4	Pentachlorodibenzofuran, 2,3,4,7,8-			0	MPCA	1e-04	MPCA
00-09-0	Pentachlorodibenzofurans, All Isomers			0	MPCA	1e-04	MPCA
40321- 76-4	Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-			0	MPCA	0	MPCA
87-86-5	Pentachlorophenol			2	CAL EPA		
109-66-0	Pentane, n-					1000	PPRTV
00-07-7	Petroleum Hydrocarbons, Aliphatic (C7 - C11)			2.5	PPRTV		
85-01-8	Phenanthrene						
108-95-2	Phenol	5800	HRV			200	CAL EPA
75-44-5	Phosgene	4	HRV			0.3	IRIS
7803-51- 2	Phosphine					0.3	IRIS
7664-38- 2	Phosphoric acid					10	IRIS

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
85-44-9	Phthalic anhydride					20	CAL EPA
1336-36- 3	Polychlorinated biphenyls (Aroclors unspeciated)			0.1	IRIS	4e-04	CAL EPA
32598- 13-3	PCB 77 (3,3,4,4- Tetrachlorobiphenyl)			0.0026	Cal EPA	0.4	CAL EPA
70362- 50-4	PCB 81 (3,4,4,5 Tetrachlorobiphenyl)			0.0026	Cal EPA	0.13	CAL EPA
32598- 14-4	PCB105 (2,3,3,4,4 Pentachlorobiphenyl)			0.0026	Cal EPA	1.3	CAL EPA
74472- 37-0	PCB 114 (2,3,4,4,5 Pentachlorobiphenyl)			5e-04	Cal EPA	1.3	CAL EPA
31508- 00-6	PCB 118 (2,3,4,4,5 Pentachlorobiphenyl)			0.0026	Cal EPA	1.3	CAL EPA
65510- 44-3	PCB 123 (2,3,4,4,5 Pentachlorobiphenyl)			0.0026	Cal EPA	1.3	CAL EPA
57465- 28-8	PCB 126 (3,3,4,4,5 Pentachlorobiphenyl)			0	Cal EPA	4e-04	CAL EPA
38380- 0804	PCB 156 (2,3,3,4,4,5 Hexachlorobiphenyl)			5e-04	Cal EPA	1.3	CAL EPA
69782- 90-7	PCB 157 (2,3,3,4,4,5 Hexachlorobiphenyl)			5e-04	Cal EPA	1.3	CAL EPA
52663- 72-6	PCB 167 (2,3,4,4,5,5 Hexachlorobiphenyl)			0.026	Cal EPA	1.3	CAL EPA
32774- 16-6	PCB 169 (3,3,4,4,5,5 Hexachlorobiphenyl)			0	Cal EPA	0.0013	CAL EPA
39635- 31-9	PCB 189 (2,3,3,4,4,5,5 Heptachlorobiphenyl)			0.0026	Cal EPA	1.3	CAL EPA
00-05-0	Polychlorinated Dibenzodioxins, Total			0	MPCA	0	CAL EPA
00-05-1	Polychlorinated Dibenzofurans, Total			0	MPCA	1e-04	MPCA
00-08-0	Polychlorinated Dibenzo-P- Dioxins And Furans, Total			0	MPCA	0	CAL EPA
130498- 29-2	Polycyclic Aromatic Hydrocarbons (PAH)			0.0056	MDH		

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
00-01-7	Polycyclic Organic Matter (POM)			0.11	MPCA/MDH		
9016-87- 9	Polymeric diphenylmethane diisocyanate					0.6	HRV
7758-01- 2	Potassium bromate			0.071	CAL EPA		
1120-71- 4	Propane sultone, 1,3-			0.014	CAL EPA		
123-38-6	Propionaldehyde					8	IRIS
115-07-1	Propylene					3000	CAL EPA
78-87-5	Propylene dichloride (1,2- Dichloropropane)					4	IRIS
107-98-2	Propylene Glycol Monomethyl Ether					2000	IRIS
75-56-9	Propylene oxide	3100	CAL EPA	3	HRV	30	IRIS
930-55-2	Pyrrolidine, 1-Nitroso-			0.016	IRIS		
7782-49- 2	Selenium					20	CAL EPA
0-01-9	Selenium Compounds					20	CAL EPA
7631-86- 9	Silica (crystalline, respirable, PM4)					3	HBV
1310-73- 2	Sodium hydroxide	8	HRV				
7789-06- 2	Strontium chromate			8e-04	HRV	0.008	IRIS
100-42-5	Styrene	21000	HRV			1000	HRV
14808- 79-8	Sulfates	120	CAL EPA				
126-33-0	Sulfolane						
7664-93- 9	Sulfuric acid (aerosol forms only)	120	CAL EPA			1	CAL EPA
8014-95- 7	Sulfuric Acid mixture w. sulfur trioxide (oleum)	120	CAL EPA				

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	cancer chronic air reference
7446-09- 5	Sulfur dioxide	660	CAL EPA				
00-09-1	TCDD Eqivalents, 2,3,7,8-			0	MPCA	0	CAL EPA
00-08-8	Tetrachlorodibenzodioxins, All Isomers			0	MPCA	0	CAL EPA
51207- 31-9	Tetrachlorodibenzofuran, 2,3,7,8-			0	MPCA	4e-04	MPCA
00-08-6	Tetrachlorodibenzofurans, All Isomers			0	MPCA	4e-04	MPCA
1746-01- 6	Tetrachlorodibenzo-p-dioxin, 2,3,7,8-			0	MPCA	0	CAL EPA
630-20-6	Tetrachloroethane, 1,1,1,2-			1.4	IRIS		
79-34-5	Tetrachloroethane, 1,1,2,2-			0.17	IRIS		
127-18-4	Tetrachloroethylene (Perchloroethylene)	20000	HRV	2	MDH	15	MDH
811-97-2	Tetrafluoroethane, 1,1,1,2-					80000	IRIS
109-99-9	Tetrahydrofuran					2000	IRIS
62-55-5	Thioacetamide			0.0059	CAL EPA		
108-88-3	Toluene	37000	HRV			400	HRV
95-80-7	Toluene diamine, 2,4-			0.0091	CAL EPA		
584-84-9	Toluene diisocyanate, 2,4-	2	CAL EPA	0.91	CAL EPA	0.07	CAL EPA
91-08-7	Toluene-2,6-diisocyanate	2	CAL EPA	0.91	CAL EPA	0.07	CAL EPA
26471- 62-5	Toluenediisocyanate (mixed isomers)			0.91	CAL EPA	0.08	HRV
8001-35- 2	Toxaphene (chlorinated camphene)			0.031	IRIS		
120-82-1	Trichlorobenzene, 1,2,4-					2	PPRTV
79-00-5	Trichloroethane, 1,1,2-			0.63	IRIS		
79-01-6	Trichloroethylene	2	HBV - Short- term	2	MDH	2	HBV

Non-

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	Non- cancer chronic air reference
76-13-1	Trichloro-1,2,2- trifluoroethane, 1,1,2-					5000	PPRTV
75-69-4	Trichlorofluoromethane (CFC-11)						
88-06-2	Trichlorophenol, 2,4,6-			3.2	IRIS		
96-18-4	Trichloropropane, 1,2,3-					0.3	IRIS
96-19-5	Trichloropropene, 1,2,3-					0.3	PPRTV
121-44-8	Triethylamine	2800	HRV			7	IRIS
420-46-2	Trifluoroethane, 1,1,1-					20000	PPRTV
526-73-8	Trimethylbenzene, 1,2,3-					60	IRIS
95-63-6	Trimethylbenzene, 1,2,4-					60	IRIS
1314-62- 1	Vanadium Pentoxide, (V2O5)	30	HRV	0.0012	PPRTV	0.007	PPRTV
108-05-4	Vinyl acetate					200	HRV
593-60-2	Vinyl bromide					3	IRIS
75-01-4	Vinyl chloride	180000	CAL EPA	1	HRV	100	IRIS
1330-20- 7	Xylenes	43000	HRV			100	IRIS
108-38-3	Xylenes, m-	43000	HRV			100	IRIS
95-47-6	Xylenes, o-	43000	HRV			100	IRIS
106-42-3	Xylenes, p-	43000	HRV			100	IRIS
13530- 65-9	Zinc chromate			8e-04	HRV	0.008	IRIS
64-19-7	Acetic Acid	700				60	
64-18-6	Formic Acid	270					
50-21-5	Lactic Acid	850				70	
79-09-4	Propionic Acid	850				70	
71-36-3	Butanol	4300				360	
67-17-5	Ethanol	180000				15000	
121-51-3	Isoamyl	10200				860	

CAS	Chemical Name	Acute air concentration	Acute air reference	Cancer based air concentration	Cancer based air reference	Non-cancer chronic air concentration	cancer chronic air reference
71-23-8	Propanol	14000				1200	
123-72-8	Butyraldehyde	2100				70	
98-01-1	Furfural	230				20	
128-38-6	Proprionaldehyde	1300				110	

## **Toxicity Value References**

Acronym	Source name	Web link
HBV or RAA	MDH Health Based Value or Risk Assessment Advice	www.health.state.mn.us/communities/environment/risk/guidance/air/table.html
HRV	MDH Health Risk Value	www.health.state.mn.us/communities/environment/risk/guidance/air/table.html
IRIS	USEPA Integrated Risk Information System	www.epa.gov/IRIS/
Cal EPA	California Environmental Protection Agency Office of Environmental Health Hazard	http://oehha.ca.gov/air/hot_spots/
PPRTV	EPA Provisional Peer Reviewed Toxicity Values for Superfund	http://hhpprtv.ornl.gov/