UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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TECHNICAL SUPPORT SECTION, 3HW13

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SUBJECT: Risk-Based Concentration Table, Third Quarter 1994

FROM: Roy L. Smith, Ph.D., Senior Toxicologist
Technical Support Section (3HW13)

TO: RBC Table mailing list

Attached is the EPA Region III risk-based concentration (RBC) table, whi distributed quarterly to all interested parties since 1991. If you are not currently on list, but would like to be, please contact Anna Poulton (phone: 215-597-3179, fax: 21 and give her your name, address, and phone and fax numbers.

The table contains reference doses and carcinogenic potency slopes (obtained from IRIS through July 1, 1994, HEAST through November March 1994, the Superfund Health Risk Technical Support Center, and other EPA sources) for nearly 600 chemicals. These toxicity constants have been combined with "standard" exposure scenarios to calculate RBCs - chemical concentrations corresponding to fixed levels of risk (*i.e.*, a hazard quotient of 1, or lifetime cancer risk of 10^{-6}, whichever occurs at a lower concentration) in water, air, fish tissue, and soil.

The Region III toxicologists use the table to screen sites not yet on the NPL, respond rapidly to citizen inquiries, and spot-check formal baseline risk assessments. The background materials provide the complete basis for all the calculations, with the intent of showing users exactly how the RBCs were developed. Simply put, RBCs are risk assessments run in reverse. For a single contaminant in a single medium, under standard default exposure assumptions, the RBC corresponds to the target risk or hazard quotient.

The calculations also have several important limitations. Specifically excluded from consideration are (1) transfers from soil to air and groundwater, and (2) cumulative risk from multiple contaminants or media. Also, the toxicity information in the table has been assembled by hand, and (despite extensive checking and years of use) may contain errors. It's advisable to cross-check before relying on any RfDs or CPSs in the table. If you find any errors, please send me a note.

Lately, many callers have asked whether the risk-based concentrations can be used as valid no-action levels or cleanup levels, especially for soils.. The answer is a bit complex. First, it is important to realize that the RBC table does not constitute regulation or guidance, and should not be viewed as a substitute for a site-specific risk assessment. For sites where:

1. A single medium is contaminated;

2. A single contaminant contributes nearly all of the health risk;

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3. Volatilization or leaching of that contaminant from soil is expected not to be significant;

4. The exposure scenarios used in the RBC table are appropriate for the site;

5. The fixed risk levels used in the RBC table are appropriate for the site; and

6. Risk to ecological receptors is expected not to be significant;

the risk-based concentrations would probably be protective as no-action levels or cleanup goals. However, to the extent that a site deviates from this description, as most do, the RBCs would not necessarily be appropriate.

To summarize, the table should generally not be used to (1) set cleanup or no-action levels at CERCLA or RCRA Corrective Action sites, (2) substitute for EPA guidance for preparing baseline risk assessments, or (3) determine if a waste is hazardous under RCRA.

This issue of the RBC table includes new toxicity constants and media concentrations, which are marked on the table in underlined boldface print. On pg. 4, the source of the toxicological constants labeled "ECAO-Cincinnati" has been clarified.

I get many telephone calls about the RBC table, but am often unable to answer the phone. Many of you have the same problem, so we play a lot of "phone tag". Last quarter, I suggested that you fax me (at 215-597-9890) your technical questions and concerns, so I could respond by return fax. This has worked very well for me, and I hope you have been satisfied with my responses. I would like to continue this method. Of course, if you don't have access to a fax machine, I will also continue to respond to voice mail messages.

Attachment

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Risk-Based Concentration Table
Background Information

General: Separate carcinogenic and non-carcinogenic risk-based concentrations were calculated for each compound for each pathway. The concentration in the table is the lower of the two, rounded to two significant figures. The following terms and values were used in the calculations:

Exposure variables	Value	Name
1-General:		
Carcinogenic potency slope oral (risk per mg/kg/d):	*	CPSo
Carcinogenic potency slope inhaled (risk per mg/kg/d):	*	CPSi
Reference dose oral (mg/kg/d):	*	RfDo
Reference dose inhaled (mg/kg/d):	*	RfDi
Target cancer risk:	1e-06	TR
Target hazard quotient:	1	THQ
Body weight, adult (kg):	70	BWa
Body weight, age 1-6 (kg):	15	BWc
Averaging time carcinogens (d):	25550	ATc
Averaging time non-carcinogens (d):	ED*365	ATn
Inhalation, adult (m3/d):	20	IRAa
Inhalation, child (m3/d):	12	IRAc
Inhalation factor, age-adjusted (m3-y/kg-d):	11.66	IFAadj
Tap water ingestion, adult (L/d):	2	IRWa
Tap water ingestion, age 1-6 (L/d):	1	IRWc
Tap water ingestion factor, age-adjusted (L-y/kg-d):	1.09	IFWadj
Fish ingestion (g/d):	54	IRF
Soil ingestion, adult (mg/d):	100	IRSa
Soil ingestion, age 1-6 (mg/d):	200	IRSc
Soil ingestion factor, age adjusted (mg-y/kg-d):	114.29	IFSadj
2-Residential:		
Exposure frequency (d/y):	350	EFr
Exposure duration, total (y):	30	EDtot

Exposure variables	Value	Name
Exposure duration, age 1-6 (y):	6	EDc
Volatilization factor (L/m3):	0.5	VF
3-Occupational:		
Exposure frequency (d/y):	250	EFo
Exposure duration (y):	25	EDo
* = Contaminant-specific toxicity parameters		

The priority among sources of toxicological constants was as follows: (1) IRIS, (2) HEAST, (3) HEAST alternative method, (4) EPA Superfund Health Risk Technical Support Center, (5) withdrawn from IRIS or HEAST, and (6) other EPA documents. Each source was used only if numbers from higher-priority sources were unavailable. The EPA Superfund Health Risk Technical Support Center, part of the Chemical Mixtures Branch of ECAO-Cincinnati, develops provisional RfDs and CPSs on request for contaminants not in IRIS or HEAST. These provisional values are labeled "e = EPA-ECAO provisional" in the table. It is possible they may be obsolete. If one of the "e" constants is important to a Superfund risk assessment, consider requesting, through a Regional risk assessor, a new provisional value.

Algorithms:

1. Age-adjusted factors: Because contact rates with tap water, ambient air, and residential soil are different for children and adults, carcinogenic risks during the first 30 years of life were calculated using age-adjusted factors. These factors approximated the integrated exposure from birth until age 30 by combining contact rates, body weights, and exposure durations for two age groups - small children and adults. The age-adjusted factor for soil was obtained from RAGS IB; the others were developed by analogy.

a. Air inhalation ([$m^3 \cdot y$]/[$kg \cdot d$]):

$$IFAadj = \frac{EDc \cdot IRAc}{BWc} + \frac{(EDtot - EDc) \cdot IRAa}{BWa}$$

b. Tap water ingestion ([$L \cdot y$]/[$kg \cdot d$]):

$$IFWadj = \frac{EDc \cdot IRWc}{BWc} + \frac{(EDtot - EDc) \cdot IRWa}{BWa}$$

c. Soil ingestion ([mg · y]/[kg · d]):

$$IFSadj = \frac{EDc \cdot IRSc}{BWc} + \frac{(EDtot - EDc) \cdot IRSa}{BWa}$$

2. Residential water use (µg/L). Volatilization terms were calculated only for compounds with "***" in the "VOC" column. Compounds having a Henry's Law constant greater than 10^{-5} were considered volatile. The list may be incomplete, but is unlikely to include false positives. The equations and the volatilization factor (VF, above) were obtained from RAGS IB. Oral potency slopes and reference doses were used for both oral and inhaled exposures for volatile compounds lacking inhalation values. Inhaled potency slopes were substituted for unavailable oral potency slopes only for volatile compounds; inhaled RfDs were substituted for unavailable oral RfDs for both volatile and non-volatile compounds.

a. Carcinogens: Calculations were based on combined childhood and adult exposure.

$$\frac{TR \cdot ATc \cdot 1000 \frac{ug}{mg}}{EFr \cdot ([VF \cdot IFAadj \cdot CPSi] + [IFWadj \cdot CPSo])}$$

b. Non-carcinogens: Calculations were based on adult exposure.

$$\frac{THQ \cdot BWa \cdot ATn \cdot 1000 \frac{ug}{mg}}{EFr \cdot EDtot \cdot \left(\frac{VF \cdot IRAa}{RfDi} + \frac{IRWa}{RfDo}\right)}$$

3. Air (µg/m^3). Oral potency slopes and references were used where inhalation values were not available.

a. Carcinogens: Calculations were based on combined childhood and adult exposure.

$$\frac{TR \cdot ATc \cdot 1000 \frac{ug}{mg}}{EFr \cdot IFAadj \cdot CPSi}$$

b. Non-carcinogens: Calculations were based on adult exposure.

$$\frac{THQ \cdot RfDi \cdot BWa \cdot ATn \cdot 1000 \frac{ug}{mg}}{EFr \cdot EDtot \cdot IRAa}$$

4. Fish (mg/kg):

a. Carcinogens: Calculations were based on adult exposure.

$$\frac{TR \cdot BWa \cdot ATc}{EFr \cdot EDtot \cdot \frac{IRF}{1000\ \frac{g}{kg}} \cdot CPSo}$$

b. Non-carcinogens: Calculations were based on adult exposure.

$$\frac{THQ \cdot RfDo \cdot BWa \cdot ATn}{EFr \cdot EDtot \cdot \frac{IRF}{1000\ \frac{g}{kg}}}$$

5. Soil commercial/industrial (mg/kg): The default exposure assumption that only 50% of incidental soil ingestion occurs at work has been omitted. Calculations were based on adult occupational exposure.

a. Carcinogens:

$$\frac{TR \cdot BWa\ ATc}{EFo \cdot EDo \cdot \frac{IRSa}{10^6\ \frac{mg}{kg}} \cdot CPSo}$$

b. Non-carcinogens:

$$\frac{THQ \cdot RfDo \cdot BWa \cdot ATn}{EFo \cdot EDo \cdot \frac{IRSa}{10^6\ \frac{mg}{kg}}}$$

6. Soil residential (mg/kg):

a. Carcinogens: Calculations were based on combined childhood and adult exposure.

$$\frac{TR \cdot ATc}{EFr \cdot \frac{IFSadj}{10^6\ \frac{mg}{kg}} \cdot CPSo}$$

b. Non-carcinogens: Calculations were based on childhood exposure only.

$$\frac{THQ \cdot RfDo \cdot BWc \cdot ATn}{EFr \cdot EDc \cdot \frac{IRSc}{10^6\ \frac{mg}{kg}}}$$

Sources: i=IRIS h=HEAST a=HEAST alt. w=Withdrawn from IRIS or HEAST e=EPA-ECAO provisional o=Other EPA documents *Basis of RBC: c=carcinogenic effects n=noncarcinogenic effects.*

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Acephate	30560191	4.00E-03 i		8.70E-03 i			7.7 c	0.72 c	0.36 c	330 c	73 c
Acetaldehyde	75070		2.57E-03 i		7.70E-03 i		94 n	0.81 c			
Acetochlor	34256821	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Acetone	67641	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Acetone cyanohydrin	75865	7.00E-02 h	4e-2 ~~2.86E-03~~ a				2600 n	10 n	95 n	72000 n	5500 n
Acetonitrile	75078	6.00E-03 i	1.43E-02 a				220 n	52 n	8.1 n	6100 n	470 n
Acetophenone	98862	1.00E-01 i	5.71E-06 w			***	0.042 n	0.021 n	140 n	100000 n	7800 n
Acifluorfen	62476599	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Acrolein	107028	2.00E-02 h	5.71E-06 i				730 n	0.021 n	27 n	20000 n	1600 n
Acrylamide	79061	2.00E-04 i		4.50E+00 i	4.5~~5~~E+00 i h		0.015 c	0.0014 c	0.0007 c	0.64 c	0.14 c
Acrylic acid	79107	5.00E-01 i	1.00E-03 i				18000 n	3.7 n	680 n	510000 n	39000 n
Acrylonitrile	107131	1.00E-03 h	5.71E-04 i	5.40E-01 i	2.~~38~~4E-01 i h		0.12 c	0.026 c	0.0058 c	5.3 c	1.2 c
Alachlor	15972608	1.00E-02 i		82 8.00E-02 h			0.84 c	0.078 c	0.039 c	36 c	8 c
Alar	1596845	1.50E-01 i					5500 n	550 n	200 n	150000 n	12000 n
Aldicarb	116063	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
Aldicarb sulfone	1646884	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
Aldrin	309002	3.00E-05 i		1.70E+01 i	1.7~~1~~E+01 i h		0.004 c	0.00037 c	0.00019 c	0.17 c	0.038 c
Ally	74223646	2.50E-01 i					9100 n	910 n	340 n	260000 n	20000 n
Allyl alcohol	107186	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Allyl chloride	107051	5.00E-02 w	2.86E-04 i				1800 n	1 n	68 n	51000 n	3900 n
Aluminum phosphide	20859738	4.00E-04 i					15 n	1.5 n	0.54 n	410 n	31 n
Amdro	67485294	3.00E-04 i					11 n	1.1 n	0.41 n	310 n	23 n
Ametryn	834128	9.00E-03 i					330 n	33 n	12 n	9200 n	700 n
m-Aminophenol	591275	7.00E-02 h					2600 n	260 n	95 n	72000 n	5500 n
4-Aminopyridine	504245	2.00E-05 h					0.73 n	0.073 n	0.027 n	20 n	1.6 n
Amitraz	33089611	2.50E-03 i					91 n	9.1 n	3.4 n	2600 n	200 n
Ammonia	7664417	*	9 2.86E-02 i				1000 n	100 n			
Ammonium sulfamate	7773060	2.00E-01 i					7300 n	730 n	270 n	200000 n	16000 n
Aniline	62533		9 2.86E-04 i	5.70E-03 i			10 n	1 n	0.55 c	500 c	110 c
Antimony and compounds	7440360	4.00E-04 i					15 n	1.5 n	0.54 n	410 n	31 n
Antimony pentoxide	1314609	5.00E-04 h					18 n	1.8 n	0.68 n	510 n	39 n
Antimony potassium tartrate	304610	9.00E-04 h					33 n	3.3 n	1.2 n	920 n	70 n
Antimony tetroxide	1332316	4.00E-04 h					15 n	1.5 n	0.54 n	410 n	31 n
Antimony trioxide	1309644	4.00E-04 h					15 n	1.5 n	0.54 n	410 n	31 n
Apollo	74115245	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Aramite	140578	5.00E-02 h		2.50E-02 i	2.~~49~~5E-02 i h		2.7 c	0.25 c	0.13 c	110 c	26 c
Arsenic	7440382	3.00E-04 i					11 n	1.1 n	0.41 n	310 n	23 n
Arsenic (as carcinogen)	7440382			A 1.75E+00 i	1.51E+01 i		0.038 c	0.00041 c	0.0018 c	1.6 c	0.37 c
Arsine	7784421		1.43E-05 i				0.52 n	0.052 n			
Assure	76578148	9.00E-03 i					330 n	33 n	12 n	9200 n	700 n
Asulam	3337711	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
Atrazine	1912249	3.50E-02 i		2.22E-01 h			0.3 c	0.028 c	0.014 c	13 c	2.9 c

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* HEAST: taste threshold 34 mg/L

570 480

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Avermectin B1	65195553	4.00E-04 *i*					15 *n*	1.5 *n*	0.54 *n*	410 *n*	31 *n*
Azobenzene	103333			1.10E-01 *i*	1.08E-01 *i* h		0.61 *c*	0.058 *c*	0.029 *c*	26 *c*	5.8 *c*
Barium and compounds	7440393	7.00E-02 *i*	1.43E-04 *e*				2600 *n*	0.52 *n*	95 *n*	72000 *n*	5500 *n*
Baygon	114261	4.00E-03 *i*					150 *n*	15 *n*	5.4 *n*	4100 *n*	310 *n*
Bayleton	43121433	3.00E-02 *i*					1100 *n*	110 *n*	41 *n*	31000 *n*	2300 *n*
Baythroid	68359375	2.50E-02 *i*					910 *n*	91 *n*	34 *n*	26000 *n*	2000 *n*
Benefin	1861401	3.00E-01 *i*					11000 *n*	1100 *n*	410 *n*	310000 *n*	23000 *n*
Benomyl	17804352	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Bentazon	25057890	2.50E-03 *i*					91 *n*	9.1 *n*	3.4 *n*	2600 *n*	200 *n*
Benzaldehyde	100527	1.00E-01 *i*				***	610 *n*	370 *n*	140 *n*	100000 *n*	7800 *n*
Benzene	71432		1.71E-03 *e*	A 2.90E-02 *i*	2.90E-02 h ***		0.36 *c*	0.22 *c*	0.11 *c*	99 *c*	22 *c*
Benzenethiol	108985	1.00E-05 *h*					0.37 *n*	0.037 *n*	0.014 *n*	10 *n*	0.78 *n*
Benzidine	92875	3.00E-03 *i*		2.30E+02 *i*	2.36E+02 *i*		0.00029 *c*	0.000027 *c*	0.000014 *c*	0.012 *c*	0.0028 *c*
Benzoic acid	65850	4.00E+00 *i*					150000 *n*	15000 *n*	5400 *n*	1000000 *n*	310000 *n*
Benzotrichloride	98077			1.30E+01 *i*			0.0052 *c*	0.00048 *c*	0.00024 *c*	0.22 *c*	0.049 *c*
Benzyl alcohol	100516	3.00E-01 *h*					11000 *n*	1100 *n*	410 *n*	310000 *n*	23000 *n*
Benzyl chloride	100447			1.70E-01 *i*	***		0.062 *c*	0.037 *c*	0.019 *c*	17 *c*	3.8 *c*
Beryllium and compounds	7440417	5.00E-03 *i*		B2 4.30E+00 *i*	8.40E+00 *i* h		0.016 *c*	0.00075 *c*	0.00073 *c*	0.67 *c*	0.15 *c*
Bidrin	141662	1.00E-04 *i*					3.7 *n*	0.37 *n*	0.14 *n*	100 *n*	7.8 *n*
Biphenthrin (Talstar)	82657043	1.50E-02 *i*					550 *n*	55 *n*	20 *n*	15000 *n*	1200 *n*
1,1-Biphenyl	92524	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Bis(2-chloroisopropyl)ether	39638329	4.00E-02 *i*		C 7.00E-02 *h*	3.50E-02 *h* ***		0.26 *c*	0.18 *c*	0.045 *c*	41 *c*	9.1 *c*
Bis(chloromethyl)ether	542881			2.20E+02 *i*	2.17E+02 *i* ***		0.000049 *c*	0.000029 *c*	0.000014 *c*	0.013 *c*	0.0029 *c*
Bis(2-chloro-1-methylethyl)ether				7.00E-02 *w*	7.00E-02 *w*		0.96 *c*	0.089 *c*	0.045 *c*	41 *c*	9.1 *c*
Bis(2-ethylhexyl)phthalate (DEHP)	117817	2.00E-02 *i*		1.40E-02 *i*	1.4e-2 e		4.8 *c*	0.45 *c*	0.23 *c*	200 *c*	46 *c*
Bis(chloroethyl)ether	111444			1.10E+00 *i*	1.16E+00 *i* ***		0.0092 *c*	0.0054 *c*	0.0029 *c*	2.6 *c*	0.58 *c*
Bisphenol A	80057	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Boron (and borates)	7440428	9.00E-02 *i*	5.71E-03 *h*				3300 *n*	21 *n*	120 *n*	92000 *n*	7000 *n*
Boron trifluoride	7637072		2.00E-04 *h*				7.3 *n*	0.73 *n*			
Bromodichloromethane	75274	2.00E-02 *i*		6.20E-02 *i*	***		0.17 *c*	0.1 *c*	0.051 *c*	46 *c*	10 *c*
Bromoethene	593602				B2 1.10E-01 *h* ***		0.096 *c*	0.057 *c*			
Bromoform (tribromomethane)	75252	2.00E-02 *i*		7.90E-03 *i*	3.85E-03 *i* ***		2.4 *c*	1.6 *c*	0.4 *c*	360 *c*	81 *c*
Bromomethane	74839	1.40E-03 *i*	1.43E-03 *i*		***		8.7 *n*	5.2 *n*	1.9 *n*	1400 *n*	110 *n*
4-Bromophenyl phenyl ether	101553	5.80E-02 *o*					2100 *n*	210 *n*	78 *n*	59000 *n*	4500 *n*
Bromophos	2104963	5.00E-03 *h*					180 *n*	18 *n*	6.8 *n*	5100 *n*	390 *n*
Bromoxynil	1689845	2.00E-02 *i*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
Bromoxynil octanoate	1689992	2.00E-02 *i*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
1,3-Butadiene	106990				9.80E-01 *i* ***		0.011 *c*	0.0064 *c*			
1-Butanol	71363	1.00E-01 *i*					3700 *n*	370 *n*	140 *n*	100000 *n*	7800 *n*
Butyl benzyl phthalate	85687	2.00E-01 *i*					7300 *n*	730 *n*	270 *n*	200000 *n*	16000 *n*
Butylate	2008415	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
sec-Butylbenzene	135988	1.00E-02 *e*				***	61 *n*	37 *n*	14 *n*	10000 *n*	780 *n*

also n-butylbenzene

1.8 h?

Sources: i=IRIS h=HEAST a=HEAST alt. w=Withdrawn from IRIS or HEAST e=EPA-ECAO provisional o=Other EPA documents *Basis of RBC: c=carcinogenic effects n=noncarcinogenic effects.*

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
tert-Butylbenzene	104518	1.00E-02 e				***	61 n	37 n	14 n	10000 n	780 n
Butylphthalyl butylglycolate	85701	1.00E+00 i					37000 n	3700 n	1400 n	1000000 n	78000 n
Cacodylic acid	75605	3.00E-03 h					110 n	11 n	4.1 n	3100 n	230 n
Cadmium and compounds	7440439	5.00E-04 i ;1e-3			B1 6.30E+00 i		18 n	0.00099 c	0.68 n	510 n	39 n
Caprolactam	105602	5.00E-01 i					18000 n	1800 n	680 n	510000 n	39000 n
Captafol	2425061	2.00E-03 i		C 8.60E-03 h			7.8 c	0.73 c	0.37 c	330 c	74 c
Captan	133062	1.30E-01 i		B2 3.50E-03 h			19 c	1.8 c	0.9 c	820 c	180 c
Carbaryl	63252	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Carbazole	86748			B2 2.00E-02 h			3.4 c	0.31 c	0.16 c	140 c	32 c
Carbofuran	1563662	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Carbon disulfide	75150	1.00E-01 i	2.86E-03 h			***	21 n	10 n	140 n	100000 n	7800 n
Carbon tetrachloride	56235	7.00E-04 i	5.71E-04 e	B2 1.30E-01 i	5.25E-02 i	***	0.16 c	0.12 c	0.024 c	22 c	4.9 c
Carbosulfan	55285148	1.00E-02 i					370 n	37 n	14 n	10000 n	780 n
Carboxin	5234684	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Chloral	75876	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Chloramben	133904	1.50E-02 i					550 n	55 n	20 n	15000 n	1200 n
Chloranil	118752			C 4.03E-01 h			0.17 c	0.016 c	0.0078 c	7.1 c	1.6 c
Chlordane	57749	6.00E-05 i		B2 1.30E+00 i	B2 1.29E+00 i		0.052 c	0.0049 c	0.0024 c	2.2 c	0.49 c
Chlorimuron-ethyl	90982324	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Chlorine	**7782505**	**1.00E-01 i**					**3700 n**	**370 n**	**140 n**	**100000 n**	**7800 n**
Chlorine dioxide	10049044		5.71E-05 i				2.1 n	0.21 n			
Chloroacetaldehyde	107200	6.90E-03 o					250 n	25 n	9.3 n	7100 n	540 n
Chloroacetic acid	79118	2.00E-03 h					73 n	7.3 n	2.7 n	2000 n	160 n
2-Chloroacetophenone	532274		8.57E-06 i				0.31 n	0.031 n			
4-Chloroaniline	106478	4.00E-03 i					150 n	15 n	5.4 n	4100 n	310 n
Chlorobenzene	108907	2.00E-02 i	5.71E-03 e			***	39 n	21 n	27 n	20000 n	1600 n
Chlorobenzilate	510156	2.00E-02 i		B2 2.70E-01 h	2.70E-01 h		0.25 c	0.023 c	0.012 c	11 c	2.4 c
p-Chlorobenzoic acid	74113	2.00E-01 h					7300 n	730 n	270 n	200000 n	16000 n
4-Chlorobenzotrifluoride	98566	2.00E-02 h					730 n	73 n	27 n	20000 n	1600 n
2-Chloro-1,3-butadiene	126998	2.00E-02 e	2.00E-03 h			***	14 n	7.3 n	27 n	20000 n	1600 n
1-Chlorobutane	109693	4.00E-01 h				***	2400 n	1500 n	540 n	410000 n	31000 n
Chlorodifluoromethane	75456		1.43e+01 i			***	87000 n	52000 n			
Chloroethane	75003	4.00E-01 e	2.86E+00 i			***	8600 n	10000 n	540 n	410000 n	31000 n
2-Chloroethyl vinyl ether	110758	2.50E-02 o				***	150 n	91 n	34 n	26000 n	2000 n
Chloroform	67663	1.00E-02 i		B2 6.10E-03 i	8.05E-02 i	***	0.15 c	0.078 c	0.52 c	470 c	100 c
Chloromethane	74873			C 1.30E-02 h	6.30E-03 h	***	1.4 c	0.99 c	0.24 c	220 c	49 c
4-Chloro-2,2-methylaniline hydrochloride	3165933			B2 4.60E-01 h			0.15 c	0.014 c	0.0069 c	6.2 c	1.4 c
4-Chloro-2-methylaniline	95692			B2 5.80E-01 h			0.12 c	0.011 c	0.0054 c	4.9 c	1.1 c
beta-Chloronaphthalene	91587	8.00E-02 i					2900 n	290 n	110 n	82000 n	6300 n
o-Chloronitrobenzene	88733			B2 2.50E-02 h		***	0.42 c	0.25 c	0.13 c	110 c	26 c
p-Chloronitrobenzene	100005			B2 1.80E-02 h		***	0.59 c	0.35 c	0.18 c	160 c	35 c
2-Chlorophenol	95578	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
2-Chloropropane	75296		2.86E-02 h			***	170 n	100 n			
Chlorothalonil	1897456	1.50E-02 i		B2 1.10E-02 h			6.1 c	0.57 c	0.29 c	260 c	58 c
o-Chlorotoluene	95498	2.00E-02 i				***	120 n	73 n	27 n	20000 n	1600 n
Chlorpropham	101213	2.00E-01 i					7300 n	730 n	270 n	200000 n	16000 n
Chlorpyrifos	2921882	3.00E-03 i					110 n	11 n	4.1 n	3100 n	230 n
Chlorpyrifos-methyl	5598130	1.00E-02 h					370 n	37 n	14 n	10000 n	780 n
Chlorsulfuron	64902723	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
Chlorthiophos	60238564	8.00E-04 h					29 n	2.9 n	1.1 n	820 n	63 n
Chromium III and compounds	16065831	1.00E+00 i	5.71E-07 w				37000 n	0.0021 n	1400 n	1000000 n	78000 n
Chromium VI and compounds	7440473	5.00E-03 i			A 4.20E+01 i h		180 n	0.00015 c	6.8 n	5100 n	390 n
Coal tar	8001589				2.20E+00 w			0.0028 c			
Cobalt	7440484	6.00E-02 e					2200 n	220 n	81 n	61000 n	4700 n
Coke Oven Emissions	8007452				2.17E+00 i			0.0029 c			
Copper and compounds	7440508	3.71E-02 h					1400 n	140 n	50 n	38000 n	2900 n
Crotonaldehyde	123739	1.00E-02 w		1.90E+00 h	1.90E+00 w		0.035 c	0.0033 c	0.0017 c	1.5 c	0.34 c
Cumene	98828	4.00E-02 i	2.57E-03 h				1500 n	9.4 n	54 n	41000 n	3100 n
Cyanides:		2e-2h									
Barium cyanide	542621	1.00E-01 w					3700 n	370 n	140 n	100000 n	7800 n
Calcium cyanide	592018	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
Copper cyanide	544923	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Cyanazine	21725462	2.00E-03 h		8.40E-01 h			0.08 c	0.0075 c	0.0038 c	3.4 c	0.76 c
Cyanogen	460195	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
Cyanogen bromide	506683	9.00E-02 i					3300 n	330 n	120 n	92000 n	7000 n
Cyanogen chloride	506774	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
Free cyanide	57125	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Hydrogen cyanide	74908	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Potassium cyanide	151508	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
Potassium silver cyanide	506616	2.00E-01 i					7300 n	730 n	270 n	200000 n	16000 n
Silver cyanide	506649	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Sodium cyanide	143339	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
Zinc cyanide	557211	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
Cyclohexanone	108941	5.00E+00 i				***	30000 n	18000 n	6800 n	1000000 n	390000 n
Cyclohexlamine	108918	2.00E-01 i					7300 n	730 n	270 n	200000 n	16000 n
Cyhalothrin/Karate	68085858	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Cypermethrin	52315078	1.00E-02 i					370 n	37 n	14 n	10000 n	780 n
Cyromazine	66215278	7.50E-03 i					270 n	27 n	10 n	7700 n	590 n
Dacthal	1861321	5.00E-01 i					18000 n	1800 n	680 n	510000 n	39000 n
Dalapon	75990	3.00E-02 i					1100 n	110 n	41 n	31000 n	2300 n
Danitol	39515418	5.00E-04 w					18 n	1.8 n	0.68 n	510 n	39 n
DDD	72548			B2 2.40E-01 i			0.28 c	0.026 c	0.013 c	12 c	2.7 c
DDE	72559			B2 3.40E-01 i			0.2 c	0.018 c	0.0093 c	8.4 c	1.9 c
DDT	50293	5.00E-04 i		B2 3.40E-01 i	B2 3.40E-01 i		0.2 c	0.018 c	0.0093 c	8.4 c	1.9 c

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Decabromodiphenyl ether	1163195	1.00E-02 *i*				***	61 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
Demeton	8065483	4.00E-05 *i*					1.5 *n*	0.15 *n*	0.054 *n*	41 *n*	3.1 *n*
Diallate	2303164			B2 6.10E-02 *h*		***	0.17 *c*	0.1 *c*	0.052 *c*	47 *c*	10 *c*
Diazinon	333415	9.00E-04 *h*					33 *n*	3.3 *n*	1.2 *n*	920 *n*	70 *n*
1,4-Dibromobenzene	106376	1.00E-02 *i*				***	61 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
Dibromochloromethane	124481	2.00E-02 *i*		8.40E-02 *i*		***	0.13 *c*	0.075 *c*	0.038 *c*	34 *c*	7.6 *c*
1,2-Dibromo-3-chloropropane	96128		5.71E-05 *i*	B2 1.40E+00 *h*	2.42E-03 *h*	***	0.048 *c*	0.21 *n*	0.0023 *c*	2 *c*	0.46 *c*
1,2-Dibromoethane	106934		5.71E-05 *h*	8.50E+01 *i*	7.70E-01 *i*	***	0.00075 *c*	0.0081 *c*	0.000037 *c*	0.034 *c*	0.0075 *c*
Dibutyl phthalate	84742	1.00E-01 *i*					3700 *n*	370 *n*	140 *n*	100000 *n*	7800 *n*
Dicamba	1918009	3.00E-02 *i*	4e-2				1100 *n*	110 *n*	41 *n*	31000 *n*	2300 *n*
1,2-Dichlorobenzene	95501	9.00E-02 *i*	~~5.71E-02~~ *a*			***	370 *n*	210 *n*	120 *n*	92000 *n*	7000 *n*
1,3-Dichlorobenzene	541731	8.90E-02 *o*				***	540 *n*	320 *n*	120 *n*	91000 *n*	7000 *n*
1,4-Dichlorobenzene	106467		2.29E-01 *i*	B2 2.40E-02 *h*		***	0.44 *c*	0.26 *c*	0.13 *c*	120 *c*	27 *c*
3,3'-Dichlorobenzidine	91941			4.50E-01 *i*			0.15 *c*	0.014 *c*	0.007 *c*	6.4 *c*	1.4 *c*
1,4-Dichloro-2-butene	764410				B2 9.30E+00 *h*	***	0.0011 *c*	0.00067 *c*			
Dichlorodifluoromethane	75718	2.00E-01 *i*	5.71E-02 *a*			***	390 *n*	210 *n*	270 *n*	200000 *n*	16000 *n*
1,1-Dichloroethane	75343	1.00E-01 *h*	1.43E-01 *a*	C	C	***	810 *n*	520 *n*	140 *n*	100000 *n*	7800 *n*
1,2-Dichloroethane (EDC)	107062		2.86E-03 *a*	B2 9.10E-02 *i*	9.10E-02 *i*	***	0.12 *c*	0.069 *c*	0.035 *c*	31 *c*	7 *c*
1,1-Dichloroethylene	75354	9.00E-03 *i*		C 6.00E-01 *i*	C 1.75E-01 *i*	***	0.044 *c*	0.036 *c*	0.0053 *c*	4.8 *c*	1.1 *c*
1,2-Dichloroethylene (cis)	156592	1.00E-02 *h*				***	61 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
1,2-Dichloroethylene (trans)	156605	2.00E-02 *i*				***	120 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
1,2-Dichloroethylene (mixture)	540590	9.00E-03 *h*				***	55 *n*	33 *n*	12 *n*	9200 *n*	700 *n*
2,4-Dichlorophenol	120832	3.00E-03 *i*					110 *n*	11 *n*	4.1 *n*	3100 *n*	230 *n*
2,4-Dichlorophenoxyacetic Acid (2,4-D)	94757	1.00E-02 *i*				***	61 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
4-(2,4-Dichlorophenoxy)butyric Acid	94826	8.00E-03 *i*					290 *n*	29 *n*	11 *n*	8200 *n*	630 *n*
1,2-Dichloropropane	78875		1.14E-03 *i*	B2 6.80E-02 *h*		***	0.16 *c*	0.092 *c*	0.046 *c*	42 *c*	9.4 *c*
2,3-Dichloropropanol	616239	3.00E-03 *i*					110 *n*	11 *n*	4.1 *n*	3100 *n*	230 *n*
1,3-Dichloropropene	542756	3.00E-04 *i*	5.71E-03 *i*	1.75E-01 *h*	1.30E-01 *h*	***	0.077 *c*	0.048 *c*	0.018 *c*	16 *c*	3.7 *c*
Dichlorvos	62737	5.00e-04 *i*	~~1.43E-04~~ *i*	2.90E-01 *i*			0.23 *c*	0.022 *c*	0.011 *c*	9.9 *c*	2.2 *c*
Dicofol	115322			4.40E-01 *w*			0.15 *c*	0.014 *c*	0.0072 *c*	6.5 *c*	1.5 *c*
Dicyclopentadiene	77736	3.00E-02 *h*	~~5.71E-05~~ *a*			***	0.42 *n*	0.21 *n*	41 *n*	31000 *n*	2300 *n*
Dieldrin	60571	5.00E-05 *i*		1.60E+01 *i*	1.61E+01 *i*		0.0042 *c*	0.00039 *c*	0.0002 *c*	0.18 *c*	0.04 *c*
Diesel emissions			1.43E-03 *i*				52 *n*	5.2 *n*			
Diethyl phthalate	84662	8.00E-01 *i*					29000 *n*	2900 *n*	1100 *n*	820000 *n*	63000 *n*
Diethylene glycol, monobutyl ether	112345		5.71E-03 *h*				210 *n*	21 *n*			
Diethylene glycol, monoethyl ether	111900	2.00E+00 *h*					73000 *n*	7300 *n*	2700 *n*	1000000 *n*	160000 *n*
Diethylforamide	617845	1.10E-02 *h*					400 *n*	40 *n*	15 *n*	11000 *n*	860 *n*
Di(2-ethylhexyl)adipate	103231	6.00E-01 *i*		1.20E-03 *i*			56 *c*	5.2 *c*	2.6 *c*	2400 *c*	530 *c*
Diethylstilbestrol	56531			A 4.70E+03 *h*			0.000014 *c*	1.30E-06 *c*	6.70E-07 *c*	0.00061 *c*	0.00014 *c*
Difenzoquat (Avenge)	43222486	8.00E-02 *i*					2900 *n*	290 *n*	110 *n*	82000 *n*	6300 *n*
Diflubenzuron	35367385	2.00E-02 *i*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
Diisopropyl methylphosphonate (DIMP)	1445756	8.00E-02 *i*					2900 *n*	290 *n*	110 *n*	82000 *n*	6300 *n*

1.2 h?

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Dimethipin	55290647	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Dimethoate	60515	2.00E-04 i					7.3 n	0.73 n	0.27 n	200 n	16 n
3,3'-Dimethoxybenzidine	119904			B2 1.40E-02 h			4.8 c	0.45 c	0.23 c	200 c	46 c
Dimethyl phthalate	131113	1.00E+01 h					370000 n	37000 n	14000 n	1000000 n	780000 n
Dimethyl terephthalate	120616	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Dimethylamine	124403		5.71E-06 w				0.21 n	0.021 n			
2,4-Dimethylaniline hydrochloride	21436964			C 5.80E-01 h			0.12 c	0.011 c	0.0054 c	4.9 c	1.1 c
2,4-Dimethylaniline	95681			C 7.50E-01 h			0.09 c	0.0083 c	0.0042 c	3.8 c	0.85 c
N-N-Dimethylaniline	121697	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
3,3'-Dimethylbenzidine	119937			B2 9.20E+00 h			0.0073 c	0.00068 c	0.00034 c	0.31 c	0.069 c
N,N-Dimethylformamide	68122	1.00E-01 h	8.57E-03 i				3700 n	31 n	140 n	100000 n	7800 n
1,1-Dimethylhydrazine	57147			B2 2.60E+00_	3.50E+00_		0.026 c	0.0018 c	0.0012 c	1.1 c	0.25 c
1,2-Dimethylhydrazine	540738			3.70E+01 w	3.70E+01 w		0.0018 c	0.00017 c	0.000085 c	0.077 c	0.017 c
2,4-Dimethylphenol	105679	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
2,6-Dimethylphenol	576261	6.00E-04 i					22 n	2.2 n	0.81 n	610 n	47 n
3,4-Dimethylphenol	95658	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
1,2-Dinitrobenzene	528290	4.00E-04 h					15 n	1.5 n	0.54 n	410 n	31 n
1,3-Dinitrobenzene	99650	1.00E-04 i					3.7 n	0.37 n	0.14 n	100 n	7.8 n
1,4-Dinitrobenzene	100254	4.00E-04 h					15 n	1.5 n	0.54 n	410 n	31 n
4,6-Dinitro-o-cyclohexyl phenol	131895	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
2,4-Dinitrophenol	51285	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Dinitrotoluene mixture				6.80E-01 i			0.099 c	0.0092 c	0.0046 c	4.2 c	0.94 c
2,4-Dinitrotoluene	121142	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
2,6-Dinitrotoluene	606202	1.00E-03 h					37 n	3.7 n	1.4 n	1000 n	78 n
Dinoseb	88857	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
di-n-Octyl phthalate	117840	2.00E-02 h					730 n	73 n	27 n	20000 n	1600 n
1,4-Dioxane	123911			1.10E-02 i			6.1 c	0.57 c	0.29 c	260 c	58 c
Diphenamid	957517	3.00E-02 i					1100 n	110 n	41 n	31000 n	2300 n
Diphenylamine	122394	2.50E-02 i					910 n	91 n	34 n	26000 n	2000 n
1,2-Diphenylhydrazine	122667			8.00E-01 i	7.70E-01 i		0.084 c	0.0081 c	0.0039 c	3.6 c	0.8 c
Diquat	85007	2.20E-03 i					80 n	8 n	3 n	2200 n	170 n
Direct black 38	1937377			A 8.60E+00 h			0.0078 c	0.00073 c	0.00037 c	0.33 c	0.074 c
Direct blue 6	2602462			A 8.10E+00 h			0.0083 c	0.00077 c	0.00039 c	0.35 c	0.079 c
Direct brown 95	16071866			A 9.30E+00 h			0.0072 c	0.00067 c	0.00034 c	0.31 c	0.069 c
Disulfoton	298044	4.00E-05 i					1.5 n	0.15 n	0.054 n	41 n	3.1 n
1,4-Dithiane	505293	1.00E-02 i					370 n	37 n	14 n	10000 n	780 n
Diuron	330541	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Dodine	2439103	4.00E-03 i					150 n	15 n	5.4 n	4100 n	310 n
Endosulfan	115297	6.00E-03 i					220 n	22 n	8.1 n	6100 n	470 n
Endothall	145733	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Endrin	72208	3.00E-04 i					11 n	1.1 n	0.41 n	310 n	23 n
Epichlorohydrin	106898	2.00E-03 h	2.86E-04 i	9.90E-03 i	4.20E-03 i		6.8 c	1 n	0.32 c	290 c	65 c

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1,2-Epoxybutane	106887		5.71E-03 *i*				210 *n*	21 *n*			
Ethephon (2-chloroethyl phosphonic acid)	16672870	5.00E-03 *i*					180 *n*	18 *n*	6.8 *n*	5100 *n*	390 *n*
Ethion	563122	5.00E-04 *i*					18 *n*	1.8 *n*	0.68 *n*	510 *n*	39 *n*
2-Ethoxyethanol acetate	111159	3.00E-01 *a*					11000 *n*	1100 *n*	410 *n*	310000 *n*	23000 *n*
2-Ethoxyethanol	110805	4.00E-01 *h*	5.71E-02 *i*				15000 *n*	210 *n*	540 *n*	410000 *n*	31000 *n*
Ethyl acrylate	140885			B2 4.80E-02 *h*			1.4 *c*	0.13 *c*	0.066 *c*	60 *c*	13 *c*
EPTC (S-Ethyl dipropylthiocarbamate)	759944	2.50E-02 *i*					910 *n*	91 *n*	34 *n*	26000 *n*	2000 *n*
Ethyl ether	60297	2.00E-01 *i*				***	1200 *n*	730 *n*	270 *n*	200000 *n*	16000 *n*
Ethyl methacrylate	97632	9.00E-02 *h*					3300 *n*	330 *n*	120 *n*	92000 *n*	7000 *n*
Ethyl acetate	141786	9.00E-01 *i*					33000 *n*	3300 *n*	1200 *n*	920000 *n*	70000 *n*
Ethylbenzene	100414	1.00E-01 *i*	2.86E-01 *i*			***	1300 *n*	1000 *n*	140 *n*	100000 *n*	7800 *n*
Ethylene cyanohydrin	109784	3.00E-01 *h*					11000 *n*	1100 *n*	410 *n*	310000 *n*	23000 *n*
Ethylene diamine	107153	2.00E-02 *h*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
Ethylene glycol	107211	2.00E+00 *i*					73000 *n*	7300 *n*	2700 *n*	1000000 *n*	160000 *n*
Ethylene glycol, monobutyl ether	111762		5.71E-03 *h*				210 *n*	21 *n*			
Ethylene oxide	75218			B1 1.02E+00 *h*	B1 3.50E-01 *h*		0.066 *c*	0.018 *c*	0.0031 *c*	2.8 *c*	0.63 *c*
Ethylene thiourea (ETU)	96457	8.00E-05 *i*		B2 1.19E-01 *h*			0.57 *c*	0.053 *c*	0.027 *c*	24 *c*	5.4 *c*
Ethyl p-nitrophenyl phenylphosphorothioate	2104645	1.00E-05 *i*					0.37 *n*	0.037 *n*	0.014 *n*	10 *n*	0.78 *n*
Ethylnitrosourea	759739			1.40E+02 *w*			0.00048 *c*	0.000045 *c*	0.000023 *c*	0.02 *c*	0.0046 *c*
Ethylphthalyl ethyl glycolate	84720	3.00E+00 *i*					110000 *n*	11000 *n*	4100 *n*	1000000 *n*	230000 *n*
Express	10120	8.00E-03 *i*					290 *n*	29 *n*	11 *n*	8200 *n*	630 *n*
Fenamiphos	22224926	2.50E-04 *i*					9.1 *n*	0.91 *n*	0.34 *n*	260 *n*	20 *n*
Fluometuron	2164172	1.30E-02 *i*					470 *n*	47 *n*	18 *n*	13000 *n*	1000 *n*
Fluoride	7782414	6.00E-02 *i*					2200 *n*	220 *n*	81 *n*	61000 *n*	4700 *n*
Fluoridone	59756604	8.00E-02 *i*					2900 *n*	290 *n*	110 *n*	82000 *n*	6300 *n*
Flurprimidol	56425913	2.00E-02 *i*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
Flutolanil	66332965	6.00E-02 *i*					2200 *n*	220 *n*	81 *n*	61000 *n*	4700 *n*
Fluvalinate	69409945	1.00E-02 *i*					370 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
Folpet	133073	1.00E-01 *i*		3.50E-03 *i*			19 *c*	1.8 *c*	0.9 *c*	820 *c*	180 *c*
Fomesafen	72178020			1.90E-01 *i*			0.35 *c*	0.033 *c*	0.017 *c*	15 *c*	3.4 *c*
Fonofos	944229	2.00E-03 *i*					73 *n*	7.3 *n*	2.7 *n*	2000 *n*	160 *n*
Formaldehyde	50000	2.00E-01 *i*			4.55E-02 *i*		7300 *n*	0.14 *c*	270 *n*	200000 *n*	16000 *n*
Formic Acid	64186	2.00E+00 *h*					73000 *n*	7300 *n*	2700 *n*	1000000 *n*	160000 *n*
Fosetyl-al	39148248	3.00E+00 *i*					110000 *n*	11000 *n*	4100 *n*	1000000 *n*	230000 *n*
Furan	110009	1.00E-03 *i*					37 *n*	3.7 *n*	1.4 *n*	1000 *n*	78 *n*
Furazolidone	67458			B2 3.80E+00 *h*			0.018 *c*	0.0016 *c*	0.00083 *c*	0.75 *c*	0.17 *c*
Furfural	98011	3.00E-03 *i*	1.43E-02 *a*				110 *n*	52 *n*	4.1 *n*	3100 *n*	230 *n*
Furium	531828			B2 5.00E+01 *h*			0.0013 *c*	0.00013 *c*	0.000063 *c*	0.057 *c*	0.013 *c*
Furmecyclox	60568050			3.00E-02 *i*			2.2 *c*	0.21 *c*	0.11 *c*	95 *c*	21 *c*
Glufosinate-ammonium	77182822	4.00E-04 *i*					15 *n*	1.5 *n*	0.54 *n*	410 *n*	31 *n*
Glycidaldehyde	765344	4.00E-04 *i*	2.86E-04 *h*				15 *n*	1 *n*	0.54 *n*	410 *n*	31 *n*
Glyphosate	1071836	1.00E-01 *i*					3700 *n*	370 *n*	140 *n*	100000 *n*	7800 *n*

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Haloxyfop-methyl	69806402	5.00E-05 i					1.8 n	0.18 n	0.068 n	51 n	3.9 n
Harmony	79277273	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
HCH (alpha)	319846			6.30E+00 i	6.30E+00 i		0.011 c	0.00099 c	0.0005 c	0.45 c	0.1 c
HCH (beta)	319857			1.80E+00 i	1.80E+00 i		0.037 c	0.0035 c	0.0018 c	1.6 c	0.35 c
HCH (gamma) Lindane	58899	3.00E-04 i		B2-C 1.30E+00 h			0.052 c	0.0048 c	0.0024 c	2.2 c	0.49 c
HCH-technical	608731			1.80E+00 i	1.79E+00 i		0.037 c	0.0035 c	0.0018 c	1.6 c	0.35 c
Heptachlor	76448	5.00E-04 i		4.50E+00 i	4.55E+00 i	***	0.0023 c	0.0014 c	0.0007 c	0.64 c	0.14 c
Heptachlor epoxide	1024573	1.30E-05 i		9.10E+00 i	9.10E+00 i	***	0.0012 c	0.00069 c	0.00035 c	0.31 c	0.07 c
Hexabromobenzene	87821	2.00E-03 i				***	12 n	7.3 n	2.7 n	2000 n	160 n
Hexachlorobenzene	118741	8.00E-04 i		1.60E+00 i	1.61E+00 i	***	0.0066 c	0.0039 c	0.002 c	1.8 c	0.4 c
Hexachlorobutadiene	87683	2.00E-04 h		7.80E-02 i	7.70E-02 i	***	0.14 c	0.081 c	0.04 c	37 c	8.2 c
Hexachlorocyclopentadiene	77474	7.00E-03 i	2.00E-05 h			***	0.15 n	0.073 n	9.5 n	7200 n	550 n
Hexachlorodibenzo-p-dioxin mixture	19408743			6.20E+03 i	4.55E+03 i		0.000011 c	1.40E-06 c	5.10E-07 c	0.00046 c	0.0001 c
Hexachloroethane	67721	1.00E-03 i		1.40E-02 i	1.40E-02 i	***	0.75 c	0.45 c	0.23 c	200 c	46 c
Hexachlorophene	70304	3.00E-04 i					11 n	1.1 n	0.41 n	310 n	23 n
Hexahydro-1,3,5-trinitro-1,3,5-triazine	121824	3.00E-03 i		1.10E-01 i			0.61 c	0.057 c	0.029 c	26 c	5.8 c
n-Hexane	110543	6.00E-02 h	5.71E-02 i			***	350 n	210 n	81 n	61000 n	4700 n
Hexazinone	51235042	3.30E-02 i					1200 n	120 n	45 n	34000 n	2600 n
Hydrazine, hydrazine sulfate	302012			3.00E+00 i	1.74E+01 i		0.022 c	0.00037 c	0.0011 c	0.95 c	0.21 c
Hydrogen chloride	7647010		2.00E-03 i				73 n	7.3 n			
Hydrogen sulfide	7783064	3.00E-03 i	2.57E-04 i				110 n	0.94 n	4.1 n	3100 n	230 n
Hydroquinone	123319	4.00E-02 h					1500 n	150 n	54 n	41000 n	3100 n
Imazalil	35554440	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Imazaquin	81335377	2.50E-01 i					9100 n	910 n	340 n	260000 n	20000 n
Iprodione	36734197	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
Isobutanol	78831	3.00E-01 i				***	1800 n	1100 n	410 n	310000 n	23000 n
Isophorone	78591	2.00E-01 i		9.50E-04 i			71 c	6.6 c	3.3 c	3000 c	670 c
Isopropalin	33820530	1.50E-02 i					550 n	55 n	20 n	15000 n	1200 n
Isopropyl methyl phosphonic acid	1832548	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Isoxaben	82558507	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
Kepone	143500			1.80E+01 e			0.0037 c	0.00035 c	0.00018 c	0.16 c	0.035 c
Lactofen	77501634	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Lead (tetraethyl)	78002	1.00E-07 i					0.0037 n	0.00037 n	0.00014 n	0.1 n	0.0078 n
Linuron	330552	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Lithium	7439932	2.00E-02 e					730 n	73 n	27 n	20000 n	1600 n
Londax	83056996	2.00E-01 i					7300 n	730 n	270 n	200000 n	16000 n
Malathion	121755	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Maleic anhydride	108316	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Maleic hydrazide	123331	5.00E-01 i					18000 n	1800 n	680 n	510000 n	39000 n
Malononitrile	109773	2.00E-05 h					0.73 n	0.073 n	0.027 n	20 n	1.6 n
Mancozeb	8018017	3.00E-02 h					1100 n	110 n	41 n	31000 n	2300 n
Maneb	12427382	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Manganese and compounds	7439965	5.00E-03 i	1.43e-05 i				180 n	0.052 n	6.8 n	5100 n	390 n
Mephosfolan	950107	9.00E-05 h					3.3 n	0.33 n	0.12 n	92 n	7 n
Mepiquat chloride	24307264	3.00E-02 i					1100 n	110 n	41 n	31000 n	2300 n
Mercury (inorganic)	7439976	3.00E-04 h	8.57E-05 h				11 n	0.31 n	0.41 n	310 n	23 n
Mercury (methyl)	22967926	3.00E-04 i					11 n	1.1 n	0.41 n	310 n	23 n
Merphos	150505	3.00E-05 i					1.1 n	0.11 n	0.041 n	31 n	2.3 n
Merphos oxide	78488	3.00E-05 i					1.1 n	0.11 n	0.041 n	31 n	2.3 n
Metalaxyl	57837191	6.00E-02 i					2200 n	220 n	81 n	61000 n	4700 n
Methacrylonitrile	126987	1.00E-04 i	2.00E-04 a				3.7 n	0.73 n	0.14 n	100 n	7.8 n
Methamidophos	10265926	5.00E-05 i					1.8 n	0.18 n	0.068 n	51 n	3.9 n
Methanol	67561	5.00E-01 i					18000 n	1800 n	680 n	510000 n	39000 n
Methidathion	950378	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
Methomyl	16752775	2.50E-02 i					910 n	91 n	34 n	26000 n	2000 n
Methoxychlor	72435	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
2-Methoxyethanol acetate	110496	2.00E-03 a					73 n	7.3 n	2.7 n	2000 n	160 n
2-Methoxyethanol	109864	1.00E-03 h	5.71E-03 i				37 n	21 n	1.4 n	1000 n	78 n
2-Methoxy-5-nitroaniline	99592			B2 4.60E-02 h			1.5 c	0.14 c	0.069 c	62 c	14 c
Methyl acetate	79209	1.00E+00 h					37000 n	3700 n	1400 n	1000000 n	78000 n
Methyl acrylate	96333	3.00E-02 a					1100 n	110 n	41 n	31000 n	2300 n
2-Methylaniline hydrochloride	636215			B2 1.80E-01 h			0.37 c	0.035 c	0.018 c	16 c	3.5 c
2-Methylaniline	95534			B2 2.40E-01 h			0.28 c	0.026 c	0.013 c	12 c	2.7 c
Methyl chlorocarbonate	79221	1.00E+00 w					37000 n	3700 n	1400 n	1000000 n	78000 n
4-(2-Methyl-4-chlorophenoxy) butyric acid	94815	1.00E-02 i					370 n	37 n	14 n	10000 n	780 n
2-Methyl-4-chlorophenoxyacetic acid	94746	5.00E-04 i					18 n	1.8 n	0.68 n	510 n	39 n
2-(2-Methyl-14-chlorophenoxy)propionic acid	93652	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
Methylcyclohexane	108872		8.57E-01 h				31000 n	3100 n			
Methylene bromide	74953	1.00E-02 a				***	61 n	37 n	14 n	10000 n	780 n
Methylene chloride	75092	6.00E-02 i	8.57E-01 h	7.50E-03 i	1.64E-03 i	***	4.1 c	3.8 c	0.42 c	380 c	85 c
4,4'-Methylene bis(2-chloroaniline)	101144	7.00E-04 h		B2 1.30E-01 h	1.30E-01 h		0.52 c	0.048 c	0.024 c	22 c	4.9 c
4,4'-Methylenebisbenzeneamine	101779			2.50E-01 w			0.27 c	0.025 c	0.013 c	11 c	2.6 c
4,4'-Methylene bis(N,N'-dimethyl)aniline	101611			4.60E-02 i			1.5 c	0.14 c	0.069 c	62 c	14 c
4,4'-Methylenediphenyl isocyanate	101688		5.71E-06 i			***	0.035 n	0.021 n			
Methyl ethyl ketone	78933	6.00E-01 i	2.86E-01 i				22000 n	1000 n	810 n	610000 n	47000 n
Methyl hydrazine	60344			1.10E+00			0.061 c	0.0057 c	0.0029 c	2.6 c	0.58 c
Methyl isobutyl ketone	108101	8.00E-02 h	2.29E-02 a				2900 n	84 n	110 n	82000 n	6300 n
Methyl methacrylate	80626	8.00E-02 h					2900 n	290 n	110 n	82000 n	6300 n
2-Methyl-5-nitroaniline	99558			C 3.30E-02 h			2 c	0.19 c	0.096 c	87 c	19 c
Methyl parathion	298000	2.50E-04 i					9.1 n	0.91 n	0.34 n	260 n	20 n
2-Methylphenol (o-cresol)	95487	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
3-Methylphenol (m-cresol)	103394	5.00E-02 i					1800 n	180 n	68 n	51000 n	3900 n
4-Methylphenol (p-cresol)	106445	5.00E-03 h					180 n	18 n	6.8 n	5100 n	390 n
Methyl styrene (mixture)	25013154	6.00E-03 a	1.14E-02 a			***	60 n	42 n	8.1 n	6100 n	470 n

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Methyl styrene (alpha)	98839	7.00E-02 a				***	430 n	260 n	95 n	72000 n	5500 n
Methyl tertbutyl ether (MTBE)	1634044	5.00E-03 e	8.57E-01 i			***	180 n	3100 n	6.8 n	5100 n	390 n
Metolaclor (Dual)	51218452	1.50E-01 h					5500 n	550 n	200 n	150000 n	12000 n
Metribuzin	21807649	2.50E-02 i					910 n	91 n	34 n	26000 n	2000 n
Mirex	2385855	2.00E-04 i		B2 1.80E+00 w			0.037 c	0.0035 c	0.0018 c	1.6 c	0.35 c
Molinate	2212671	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Molybdenum	7439987	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Monochloramine	10599903	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Naled	300765	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
2-Naphthylamine	**91598**			**1.30e+02 a**			**0.00052 c**	**0.000048 c**	**0.000024 c**	**0.022 c**	**0.0049 c**
Napropamide	15299997	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Nickel refinery dust					8.40E-01 i			0.0075 c			
Nickel (soluble salts)	7440020	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Nickel subsulfide	12035722				1.70E+00 i			0.0037 c			
Nitrapyrin	1929824	1.50E-03 w					55 n	5.5 n	2 n	1500 n	120 n
Nitrate	14797558	1.60E+00 i					58000 n	5800 n	2200 n	1000000 n	130000 n
Nitric Oxide	10102439	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
Nitrite	14797650	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
2-Nitroaniline	88744	6.00E-05 w	5.71E-05 h				2.2 n	0.21 n	0.081 n	61 n	4.7 n
3-Nitroaniline	99092	3.00E-03 o					110 n	11 n	4.1 n	3100 n	230 n
4-Nitroaniline	100016	3.00E-03 o					110 n	11 n	4.1 n	3100 n	230 n
Nitrobenzene	98953	5.00E-04 i	~~5.71~~E-04 a			***	3.4 n	2.1 n	0.68 n	510 n	39 n
Nitrofurantoin	67209	7.00E-02 h					2600 n	260 n	95 n	72000 n	5500 n
Nitrofurazone	59870			B2 1.50E+00 h	9.40E+00 h		0.045 c	0.00067 c	0.0021 c	1.9 c	0.43 c
Nitrogen dioxide	10102440	1.00E+00 i					37000 n	3700 n	1400 n	1000000 n	78000 n
Nitroguanidine	556887	1.00E-01 i					3700 n	370 n	140 n	100000 n	7800 n
4-Nitrophenol	100027	6.20E-02 o					2300 n	230 n	84 n	63000 n	4800 n
2-Nitropropane	79469		5.71E-03 i		B2 9.40E+00 h		210 n	0.00067 c			
N-Nitrosodi-n-butylamine	924163			5.40E+00 i	5.60E+00 i		0.012 c	0.0011 c	0.00058 c	0.53 c	0.12 c
N-Nitrosodiethanolamine	1116547			2.80E+00 i			0.024 c	0.0022 c	0.0011 c	1 c	0.23 c
N-Nitrosodiethylamine	55185			1.50E+02 i	1.51E+02 i		0.00045 c	0.000041 c	0.000021 c	0.019 c	0.0043 c
N-Nitrosodimethylamine	62759			5.10E+01 i	~~4.90~~E+01 i 5.1		0.0013 c	0.00013 c	0.000062 c	0.056 c	0.013 c
N-Nitrosodiphenylamine	86306			4.90E-03 i			14 c	1.3 c	0.64 c	580 c	130 c
N-Nitroso di-n-propylamine	621647			7.00E+00 i			0.0096 c	0.00089 c	0.00045 c	0.41 c	0.091 c
N-Nitroso-N-methylethylamine	10595956			2.20E+01 i			0.0031 c	0.00028 c	0.00014 c	0.13 c	0.029 c
N-Nitrosopyrrolidine	930552			2.10E+00 i	2.18E+00 i		0.032 c	0.0029 c	0.0015 c	1.4 c	0.3 c
m-Nitrotoluene	99081	1.00E-02 h				***	61 n	37 n	14 n	10000 n	780 n
o-Nitrotoluene	88722	1.00E-02 h				***	61 n	37 n	14 n	10000 n	780 n
p-Nitrotoluene	99990	1.00E-02 h				***	61 n	37 n	14 n	10000 n	780 n
Norflurazon	27314132	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
NuStar	85509199	7.00E-04 i					26 n	2.6 n	0.95 n	720 n	55 n
Octabromodiphenyl ether	32536520	3.00E-03 i					110 n	11 n	4.1 n	3100 n	230 n

N-Nitroso-N-ethylurea B2 oral CSF = 1.4e2 (h)

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Octahydro-1357-tetranitro-1357-tetrazocine	2691410	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Octamethylpyrophosphoramide	152169	2.00E-03 *h*					73 *n*	7.3 *n*	2.7 *n*	2000 *n*	160 *n*
Oryzalin	19044883	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Oxadiazon	19666309	5.00E-03 *i*					180 *n*	18 *n*	6.8 *n*	5100 *n*	390 *n*
Oxamyl	23135220	2.50E-02 *i*					910 *n*	91 *n*	34 *n*	26000 *n*	2000 *n*
Oxyfluorfen	42874033	3.00E-03 *i*					110 *n*	11 *n*	4.1 *n*	3100 *n*	230 *n*
Paclobutrazol	76738620	1.30E-02 *i*					470 *n*	47 *n*	18 *n*	13000 *n*	1000 *n*
Paraquat	1910425	4.50E-03 *i*					160 *n*	16 *n*	6.1 *n*	4600 *n*	350 *n*
Parathion	56382	6.00E-03 *h*					220 *n*	22 *n*	8.1 *n*	6100 *n*	470 *n*
Pebulate	1114712	5.00E-02 *h*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Pendimethalin	40487421	4.00E-02 *i*					1500 *n*	150 *n*	54 *n*	41000 *n*	3100 *n*
Pentabromo-6-chloro cyclohexane	87843			e 2.30E-02 *h*			2.9 *c*	0.27 *c*	0.14 *c*	120 *c*	28 *c*
Pentabromodiphenyl ether	32534819	2.00E-03 *i*					73 *n*	7.3 *n*	2.7 *n*	2000 *n*	160 *n*
Pentachlorobenzene	608935	8.00E-04 *i*				***	4.9 *n*	2.9 *n*	1.1 *n*	820 *n*	63 *n*
Pentachloronitrobenzene	82688	3.00E-03 *i*		C 2.60E-01 *h*		***	0.041 *c*	0.024 *c*	0.012 *c*	11 *c*	2.5 *c*
Pentachlorophenol	87865	3.00E-02 *i*		1.20E-01 *i*			0.56 *c*	0.052 *c*	0.026 *c*	24 *c*	5.3 *c*
Permethrin	52645531	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*
Phenmedipham	13684634	2.50E-01 *i*					9100 *n*	910 *n*	340 *n*	260000 *n*	20000 *n*
Phenol	108952	6.00E-01 *i*					22000 *n*	2200 *n*	810 *n*	610000 *n*	47000 *n*
m-Phenylenediamine	108452	6.00E-03 *i*					220 *n*	22 *n*	8.1 *n*	6100 *n*	470 *n*
p-Phenylenediamine	106503	1.90E-01 *h*					6900 *n*	690 *n*	260 *n*	190000 *n*	15000 *n*
Phenylmercuric acetate	62384	8.00E-05 *i*					2.9 *n*	0.29 *n*	0.11 *n*	82 *n*	6.3 *n*
2-Phenylphenol	90437			C 1.94E-03 *h*			35 *c*	3.2 *c*	1.6 *c*	1500 *c*	330 *c*
Phorate	298022	2.00E-04 *h*					7.3 *n*	0.73 *n*	0.27 *n*	200 *n*	16 *n*
Phosmet	732116	2.00E-02 *i*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
Phosphine	7803512	3.00E-04 *i*	8.57E-06 *h*				11 *n*	0.031 *n*	0.41 *n*	310 *n*	23 *n*
Phosphorus (white)	7723140	2.00E-05 *i*					0.73 *n*	0.073 *n*	0.027 *n*	20 *n*	1.6 *n*
p-Phthalic acid	100210	1.00E+00 *h*					37000 *n*	3700 *n*	1400 *n*	1000000 *n*	78000 *n*
Phthalic anhydride	85449	2.00E+00 *i*	3.43E-01 *h*				73000 *n*	1300 *n*	2700 *n*	1000000 *n*	160000 *n*
Picloram	1918021	7.00E-02 *i*					2600 *n*	260 *n*	95 *n*	72000 *n*	5500 *n*
Pirimiphos-methyl	29232937	1.00E-02 *i*					370 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
Polybrominated biphenyls		7.00E-06 *h*		B2 8.90E+00 *h*			0.0076 *c*	0.0007 *c*	0.00035 *c*	0.32 *c*	0.072 *c*
Polychlorinated biphenyls (PCBs)	1336363			7.70E+00 *i*			0.0087 *c*	0.00081 *c*	0.00041 *c*	0.37 *c*	0.083 *c*
Aroclor 1016	12674112	7.00E-05 *i*					2.6 *n*	0.26 *n*	0.095 *n*	72 *n*	5.5 *n*
Aroclor 1254 Polychlorinated terphenyls (PCTs)		2e-5		4.50E+00 •			0.015 *c*	0.0014 *c*	0.0007 *c*	0.64 *c*	0.14 *c*
Polynuclear aromatic hydrocarbons											
Acenaphthene	83329	6.00E-02 *i*					2200 *n*	220 *n*	81 *n*	61000 *n*	4700 *n*
Anthracene	120127	3.00E-01 *i*					11000 *n*	1100 *n*	410 *n*	310000 *n*	23000 *n*
Benzo[a]pyrene	50328			7.30E+00 *i*	6.10E+00 *h*		0.0092 *c*	0.001 *c*	0.00043 *c*	0.39 *c*	0.088 *c*
Benzo[b]fluoranthene	205992			7.30E-01 •	6.10E-01 •		0.092 *c*	0.01 *c*	0.0043 *c*	3.9 *c*	0.88 *c*
Benzo[k]fluoranthene	207089			7.30E-02 •	6.10E-02 •		0.92 *c*	0.1 *c*	0.043 *c*	39 *c*	8.8 *c*
Benz[a]anthracene	56553			7.30E-01 •	6.10E-01 •		0.092 *c*	0.01 *c*	0.0043 *c*	3.9 *c*	0.88 *c*

Dibenzofuran 4e-3 (ECAO) B2) 4.7e-2h
6e-3h
O-Phenylenediamine

Phenanthrene 3e-2? Dibenzofuran oral RfD 4e-3
Bghip CSF 7.3e-2

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Chrysene	218019			7.30E-03 e	6.10E-03 e		9.2 c	1 c	0.43 c	390 c	88 c
Dibenz[ah]anthracene	53703			7.30E+00 e	6.10E+00 e		0.0092 c	0.001 c	0.00043 c	0.39 c	0.088 c
Fluoranthene	206440	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
Fluorene	86737	4.00E-02 i					1500 n	150 n	54 n	41000 n	3100 n
Indeno[1,2,3-cd]pyrene	193395			7.30E-01 e	6.10E-01 e		0.092 c	0.01 c	0.0043 c	3.9 c	0.88 c
Naphthalene	91203	4.00E-02 w					1500 n	150 n	54 n	41000 n	3100 n
Pyrene	129000	3.00E-02 i					1100 n	110 n	41 n	31000 n	2300 n
Prochloraz	67747095	9.00E-03 i		1.50E-01 i			0.45 c	0.042 c	0.021 c	19 c	4.3 c
Profluralin	26399360	6.00E-03 h					220 n	22 n	8.1 n	6100 n	470 n
Prometon	1610180	1.50E-02 i					550 n	55 n	20 n	15000 n	1200 n
Prometryn	7287196	4.00E-03 i					150 n	15 n	5.4 n	4100 n	310 n
Pronamide	23950585	7.50E-02 i					2700 n	270 n	100 n	77000 n	5900 n
Propachlor	1918167	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Propanil	709988	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Propargite	2312358	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Propargyl alcohol	107197	2.00E-03 i					73 n	7.3 n	2.7 n	2000 n	160 n
Propazine	139402	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Propham	122429	2.00E-02 i					730 n	73 n	27 n	20000 n	1600 n
Propiconazole	60207901	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Propylene glycol	57556	2.00E+01 h					730000 n	73000 n	27000 n	1000000 n	1000000 n
Propylene glycol, monoethyl ether	52125538	7.00E-01 h					26000 n	2600 n	950 n	720000 n	55000 n
Propylene glycol, monomethyl ether	107982	7.00E-01 h	5.71E-01 i				26000 n	2100 n	950 n	720000 n	55000 n
Propylene oxide	75569		8.57E-03 i	2.40E-01 i	1.29E-02 i h		0.28 c	0.49 c	0.013 c	12 c	2.7 c
Pursuit	81335775	2.50E-01 i					9100 n	910 n	340 n	260000 n	20000 n
Pydrin	51630581	2.50E-02 i					910 n	91 n	34 n	26000 n	2000 n
Pyridine	110861	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
Quinalphos	13593038	5.00E-04 i					18 n	1.8 n	0.68 n	510 n	39 n
Quinoline	91225			C 1.20E+01 h			0.0056 c	0.00052 c	0.00026 c	0.24 c	0.053 c
Resmethrin	10463868	3.00E-02 i					1100 n	110 n	41 n	31000 n	2300 n
Ronnel	299843	5.00E-02 h					1800 n	180 n	68 n	51000 n	3900 n
Rotenone	83794	4.00E-03 i					150 n	15 n	5.4 n	4100 n	310 n
Savey	78587050	2.50E-02 i					910 n	91 n	34 n	26000 n	2000 n
Selenious Acid	7783008	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Selenium	7782492	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Selenourea	630104	5.00E-03 h					180 n	18 n	6.8 n	5100 n	390 n
Sethoxydim	74051802	9.00E-02 i					3300 n	330 n	120 n	92000 n	7000 n
Silver and compounds	7440224	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Simazine	122349	5.00E-03 i		C 1.20E-01 h			0.56 c	0.052 c	0.026 c	24 c	5.3 c
Sodium azide	26628228	4.00E-03 i					150 n	15 n	5.4 n	4100 n	310 n
Sodium diethyldithiocarbamate	148185	3.00E-02 i		C 2.70E-01 h			0.25 c	0.023 c	0.012 c	11 c	2.4 c
Sodium fluoroacetate	62748	2.00E-05 i					0.73 n	0.073 n	0.027 n	20 n	1.6 n
Sodium metavanadate	13718268	1.00E-03 h					37 n	3.7 n	1.4 n	1000 n	78 n

n-Propylbenzene oral RfD 1e-2 (e)

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Strontium, stable	7440246	6.00E-01 i					22000 n	2200 n	810 n	610000 n	47000 n
Strychnine	57249	3.00E-04 i					11 n	1.1 n	0.41 n	310 n	23 n
Styrene	100425	2.00E-01 i	2.86E-01 i h			***	1600 n	1000 n	270 n	200000 n	16000 n
Systhane	88671890	2.50E-02 i					910 n	91 n	34 n	26000 n	2000 n
2,3,7,8-TCDD (dioxin)	1746016			B2 1.56E+05 h	1.16E+05 h		4.30E-07 c	5.40E-08 c	2.00E-08 c	0.000018 c	4.10E-06 c
Tebuthiuron	34014181	7.00E-02 i					2600 n	260 n	95 n	72000 n	5500 n
Temephos	3383968	2.00E-02 h					730 n	73 n	27 n	20000 n	1600 n
Terbacil	5902512	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Terbufos	13071799	2.50E-05 h					0.91 n	0.091 n	0.034 n	26 n	2 n
Terbutryn	886500	1.00E-03 i					37 n	3.7 n	1.4 n	1000 n	78 n
1,2,4,5-Tetrachlorobenzene	95943	3.00E-04 i				***	1.8 n	1.1 n	0.41 n	310 n	23 n
1,1,1,2-Tetrachloroethane	630206	3.00E-02 i		2.60E-02 i	2.59E-02 i	***	0.41 c	0.24 c	0.12 c	110 c	25 c
1,1,2,2-Tetrachloroethane	79345			2.00E-01 i	2.03E-01 i	***	0.052 c	0.031 c	0.016 c	14 c	3.2 c
Tetrachloroethylene (PCE)	127184	1.00E-02 i		B2 5.20E-02 e	2.03E-03 e	***	1.1 c	3.1 c	0.061 c	55 c	12 c
2,3,4,6-Tetrachlorophenol	58902	3.00E-02 i					1100 n	110 n	41 n	31000 n	2300 n
p,a,a,a-Tetrachlorotoluene	5216251			B2 2.00E+01 h		***	0.00053 c	0.00031 c	0.00016 c	0.14 c	0.032 c
Tetrachlorovinphos	961115	3.00E-02 i		C 2.40E-02 h			2.8 c	0.26 c	0.13 c	120 c	27 c
Tetraethyldithiopyrophosphate	3689245	5.00E-04 i					18 n	1.8 n	0.68 n	510 n	39 n
Thallic oxide	1314325	7.00E-05 w					2.6 n	0.26 n	0.095 n	72 n	5.5 n
Thallium											
Thallium acetate	563688	9.00E-05 i					3.3 n	0.33 n	0.12 n	92 n	7 n
Thallium carbonate	6533739	8.00E-05 i					2.9 n	0.29 n	0.11 n	82 n	6.3 n
Thallium chloride	7791120	8.00E-05 i					2.9 n	0.29 n	0.11 n	82 n	6.3 n
Thallium nitrate	10102451	9.00E-05 i					3.3 n	0.33 n	0.12 n	92 n	7 n
Thallium selenite	12039520	9.00E-05 w					3.3 n	0.33 n	0.12 n	92 n	7 n
Thallium sulfate	7446186	8.00E-05 i					2.9 n	0.29 n	0.11 n	82 n	6.3 n
Thiobencarb	28249776	1.00E-02 i					370 n	37 n	14 n	10000 n	780 n
2-(Thiocyanomethylthio)-benzothiazole	21564170	3.00E-02 h					1100 n	110 n	41 n	31000 n	2300 n
Thiofanox	39196184	3.00E-04 h					11 n	1.1 n	0.41 n	310 n	23 n
Thiophanate-methyl	23564058	8.00E-02 i					2900 n	290 n	110 n	82000 n	6300 n
Thiram	137268	5.00E-03 i					180 n	18 n	6.8 n	5100 n	390 n
Tin and compounds		6.00E-01 h					22000 n	2200 n	810 n	610000 n	47000 n
Toluene	108883	2.00E-01 i	1.14E-01 i			***	750 n	420 n	270 n	200000 n	16000 n
Toluene-2,4-diamine	95807			B2 3.20E+00 h			0.021 c	0.002 c	0.00099 c	0.89 c	0.2 c
Toluene-2,5-diamine	95705	6.00E-01 h					22000 n	2200 n	810 n	610000 n	47000 n
Toluene-2,6-diamine	823405	2.00E-01 h					7300 n	730 n	270 n	200000 n	16000 n
p-Toluidine	106490			C 1.90E-01 h			0.35 c	0.033 c	0.017 c	15 c	3.4 c
Toxaphene	8001352			1.10E+00 i	1.13E+00 i		0.061 c	0.0056 c	0.0029 c	2.6 c	0.58 c
Tralomethrin	66841256	7.50E-03 i					270 n	27 n	10 n	7700 n	590 n
Triallate	2303175	1.30E-02 i					470 n	47 n	18 n	13000 n	1000 n
Triasulfuron	82097505	1.00E-02 i					370 n	37 n	14 n	10000 n	780 n
1,2,4-Tribromobenzene	615543	5.00E-03 i				***	30 n	18 n	6.8 n	5100 n	390 n

RfC 9e-3 mg/m3 non-typical carcinogen

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg·d/mg	CPSi kg·d/mg	VOC	Tap water µg/L	Ambient air µg/m3	Fish mg/kg	Industrial soil mg/kg	Residential soil mg/kg
Tributyltin oxide (TBTO)	56359	3.00E-05 *i*					1.1 *n*	0.11 *n*	0.041 *n*	31 *n*	2.3 *n*
2,4,6-Trichloroaniline hydrochloride	33663502			e 2.90E-02 *h*			2.3 *c*	0.22 *c*	0.11 *c*	99 *c*	22 *c*
2,4,6-Trichloroaniline	634935			C 3.40E-02 *h*			2 *c*	0.18 *c*	0.093 *c*	84 *c*	19 *c*
1,2,4-Trichlorobenzene	120821	1.00E-02 *i*	3e-3 ~~5.71e-02~~ *h* 93,w			***	190 *n*	210 *n*	14 *n*	10000 *n*	780 *n*
1,1,1-Trichloroethane	71556	9.00E-02 *w*	2.86E-01 *w*			***	1300 *n*	1000 *n*	120 *n*	92000 *n*	7000 *n*
1,1,2-Trichloroethane	79005	4.00E-03 *i*		C 5.70E-02 *i*	C 5.60E-02 *i*	***	0.19 *c*	0.11 *c*	0.055 *c*	50 *c*	11 *c*
Trichloroethylene (TCE)	79016	6.00E-03 *e*		B2 1.10E-02 *w*	6.00E-03 *e*	***	1.6 *c*	1 *c*	0.29 *c*	260 *c*	58 *c*
Trichlorofluoromethane	75694	3.00E-01 *i*	2.00E-01 *e*			***	1300 *n*	730 *n*	410 *n*	310000 *n*	23000 *n*
2,4,5-Trichlorophenol	95954	1.00E-01 *i*					3700 *n*	370 *n*	140 *n*	100000 *n*	7800 *n*
2,4,6-Trichlorophenol	88062			1.10E-02 *i*	1.09E-02 *i*		6.1 *c*	0.57 *c*	0.29 *c*	260 *c*	58 *c*
2,4,5-Trichlorophenoxyacetic acid	93765	1.00E-02 *i*					370 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
2-(2,4,5-Trichlorophenoxy)propionic acid	93721	8.00E-03 *i*					290 *n*	29 *n*	11 *n*	8200 *n*	630 *n*
1,1,2-Trichloropropane	598776	5.00E-03 *i*				***	30 *n*	18 *n*	6.8 *n*	5100 *n*	390 *n*
1,2,3-Trichloropropane	96184	6.00E-03 *i*		B2 7.00e+00 *i*		***	0.0015 *c*	0.00089 *c*	0.00045 *c*	0.41 *c*	0.091 *c*
1,2,3-Trichloropropene	96195	5.00E-03 *h*				***	30 *n*	18 *n*	6.8 *n*	5100 *n*	390 *n*
1,1,2-Trichloro-1,2,2- trifluoroethane	76131	3.00E+01 *i*	8.57E+00 *h*			***	59000 *n*	31000 *n*	41000 *n*	1000000 *n*	1000000 *n*
Tridiphane	58138082	3.00E-03 *i*					110 *n*	11 *n*	4.1 *n*	3100 *n*	230 *n*
Triethylamine	121448		2.00E-03 *i*				73 *n*	7.3 *n*			
Trifluralin	1582098	7.50E-03 *i*		7.70E-03 *i*			8.7 *c*	0.81 *c*	0.41 *c*	370 *c*	83 *c*
1,2,4-Trimethylbenzene	95636	5.00e-04 *e*	1.7e-3e			***	3 *n*	1.8 *n*	0.68 *n*	510 *n*	39 *n*
1,3,5-Trimethylbenzene	108678	4.00e-04 *e*	1.7e-3e			***	2.4 *n*	1.5 *n*	0.54 *n*	410 *n*	31 *n*
Trimethyl phosphate	512561			B2 3.70E-02 *h*			1.8 *c*	0.17 *c*	0.085 *c*	77 *c*	17 *c*
1,3,5-Trinitrobenzene	99354	5.00E-05 *i*					1.8 *n*	0.18 *n*	0.068 *n*	51 *n*	3.9 *n*
Trinitrophenylmethylnitramine	479458	1.00E-02 *h*					370 *n*	37 *n*	14 *n*	10000 *n*	780 *n*
2,4,6-Trinitrotoluene	118967	5.00E-04 *i*		3.00E-02 *i*			2.2 *c*	0.21 *c*	0.11 *c*	95 *c*	21 *c*
Uranium (soluble salts)	7440611	3.00E-03 *i*					110 *n*	11 *n*	4.1 *n*	3100 *n*	230 *n*
Vanadium	7440622	7.00E-03 *h*					260 *n*	26 *n*	9.5 *n*	7200 *n*	550 *n*
Vanadium pentoxide	1314621	9.00E-03 *i*					330 *n*	33 *n*	12 *n*	9200 *n*	700 *n*
Vanadium sulfate	36907423	2.00E-02 *h*					730 *n*	73 *n*	27 *n*	20000 *n*	1600 *n*
Vernam	1929777	1.00E-03 *i*					37 *n*	3.7 *n*	1.4 *n*	1000 *n*	78 *n*
Vinclozolin	50471448	2.50E-02 *i*					910 *n*	91 *n*	34 *n*	26000 *n*	2000 *n*
Vinyl acetate	108054	1.00E+00 *h*	5.71E-02 *i*				37000 *n*	210 *n*	1400 *n*	1000000 *n*	78000 *n*
Vinyl bromide	593602		8.57E-04 *i*			***	5.2 *n*	3.1 *n*			
Vinyl chloride	75014			A 1.90E+00 *h*	A 3.00E-01 *h*	***	0.019 *c*	0.021 *c*	0.0017 *c*	1.5 *c*	0.34 *c*
Warfarin	81812	3.00E-04 *i*					11 *n*	1.1 *n*	0.41 *n*	310 *n*	23 *n*
m-Xylene	108323	2.00E+00 *h*	2.00E-01 *w*			***	1400 *n*	730 *n*	2700 *n*	1000000 *n*	160000 *n*
o-Xylene	95476	2.00E+00 *h*	2.00E-01 *w*			***	1400 *n*	730 *n*	2700 *n*	1000000 *n*	160000 *n*
p-Xylene	106423		8.57E-02 *w*			***	520 *n*	310 *n*			
Xylene (mixed)	1330207	2.00E+00 *i*				***	12000 *n*	7300 *n*	2700 *n*	1000000 *n*	160000 *n*
Zinc	7440666	3.00E-01 *i*					11000 *n*	1100 *n*	410 *n*	310000 *n*	23000 *n*
Zinc phosphide	1314847	3.00E-04 *i*					11 *n*	1.1 *n*	0.41 *n*	310 *n*	23 *n*
Zineb	12122677	5.00E-02 *i*					1800 *n*	180 *n*	68 *n*	51000 *n*	3900 *n*