

Table 1 : Results of Initial Health Risk Assessment (FY1997 - 2000)

	CAS Number	Substance	Hazard Assessment of General Toxicity and Reproductive and Developmental Toxicity (Basis for NOAEL)				Exposure Assessment		Margin of Exposure (MOE)	Assessment Result	IARC Classification
			Route of Exposure	Animal species	Endpoints	NOAEL	Route of Exposure	Estimated Maximum Exposure Level			
1	79-06-1	Acrylamide	Oral	Cat	Transient gait disturbance	0.2 mg/kg/day	Inhalation (ambient) #1	< 0.006 µg/kg/day	> 3,300		2 A
			Inhalation	-	-	-	-	-	-	x	
2	75-07-0	Acetaldehyde	Oral	-	-	-	-	-	-	x	2 B
			Inhalation	Rat	Decreased macrophages in pulmonary lavage fluid, olfactory epithelium degeneration	4.9 mg/m ³	Inhalation (indoor)	140 µg/m ³	3.5		
			Inhalation (ambient)				5.5 µg/m ³	89			
3	62-53-3	Aniline	-	-	-	-	-	-	x	3	
4	309-00-2	Aldrin	See "Dieldrin"							3	
5	78-79-5	Isoprene	-	-	-	-	-	-	x	2 B	
6	100-41-4	Ethylbenzene	Oral	Rat-Mouse	Cloudy swelling of hepatic cells and renal tubular epithelial cells	97 mg/kg/day	Oral	0.004 µg/kg/day	2,400,000	# ³	2 B
			Inhalation	Rabbit	Decrease in living fetuses	120 mg/m ³	Inhalation (indoor)	70 µg/m ³	170		
							Inhalation (ambient)	6.9 µg/m ³	1,700		
7	106-89-8	Epichlorohydrin	-	-	-	-	-	-	x	2 A	
8	72-20-8	Endrin	Oral	Dog	Hepatic damage	0.03 mg/kg/day	Oral	< 0.0040 µg/kg/day	> 630		3
			Inhalation	-	-	-	-	-	-	x	
9	1330-20-7	Xylene	Oral	Rat	Reduced body weight gain, increased mortality	180 mg/kg/day	Oral	< 2.0 µg/kg/day	> 9,000		3
			Inhalation	Human	CNS-related subjective symptoms	2.2 mg/m ³	Inhalation (indoor)	115 µg/m ³	19		
							Inhalation (ambient)	34 µg/m ³	65		
10	100-00-5	1-Chloro-4-nitrobenzene	-	-	-	-	-	-	x	3	
11	123-86-4	Butyl acetate	-	-	-	-	-	-	x	-	
12	75-56-9	Propylene oxide	Oral	-	-	-	-	-	-	x	2 B
			Inhalation	Rat	Degeneration of nasal epithelial cells	1.3 mg/m ³	Inhalation (indoor)	-	-	x	
							Inhalation (ambient)	0.15 µg/m ³	870		
13	75-35-4	1,1-Dichloroethylene	Oral	Rat	Hepatocellular vacuolation, hepatocellular fatty change	0.9 mg/kg/day	Oral	< 0.10 µg/kg/day	> 900		3
			Inhalation	Rat	Hepatocellular vacuolation	1.8 mg/m ³	Inhalation (indoor)	< 0.05 µg/m ³	> 3,600		
							Inhalation (ambient)	0.029 µg/m ³	6,200		
14	542-75-6	1,3-Dichloropropene	Oral	Rat-Mouse	Reduced body weight gain	2.5 mg/kg/day	Oral	< 0.088 µg/kg/day	> 2,800		2 B
			Inhalation	Human	Reduction in sperm counts and percentages of normal sperms	1.1 mg/m ³	Inhalation (indoor)	-	-	x	
							Inhalation (ambient)	1.7 µg/m ³	650		
15	95-50-1	o-Dichlorobenzene	Oral	Mouse	Change in the renal tubule	43 mg/kg/day	Oral	< 0.042 µg/kg/day	> 100,000		3
			Inhalation	Rat	Pneumonia, acidophilia	0.02 mg/m ³	Inhalation (indoor)	< 0.2 µg/m ³	> 12		
							Inhalation (ambient)	0.12 µg/m ³	20		
16	106-46-7	p-Dichlorobenzene	Oral	Dog	Increased weight of liver, kidney and thyroids, elevation of ALP, hepatocellular hypertrophy	7.1 mg/kg/day	Oral	3.6 µg/kg/day	200		2 B
			Inhalation	Rat	Increased weight of liver and kidney	7.5 mg/m ³	Inhalation (indoor)	530 µg/m ³	1.4		
							Inhalation (ambient)	2.9 µg/m ³	260		
17	68-12-2	N,N-Dimethylformamide	Oral	-	-	-	-	-	-	x	3
			Inhalation	Human	Headache, dizziness, liver dysfunction	0.52 mg/m ³	Inhalation (indoor)	-	-	x	

			Inhalation	Human	Headache, dyspepsia, liver dysfunction	0.52 mg/m	Inhalation (ambient)	0.47 µg/m ³	1,100			
18	74-83-9	Methylbromide	Oral	Rat	Squamous cell hyperplasia of the forestomach	0.14 mg/kg/day	Oral	< 0.20 µg/kg/day	> 70		3	
			Inhalation	Rat	Inflammation of nasal mucosa	0.28 mg/m ³	Inhalation (indoor)	-	-	x		
					Inhalation (ambient)		0.21 µg/m ³	130				
19	100-42-5	Styrene	Oral	Dog	Increased Heinz bodies	140 mg/kg/day	Oral	< 0.40 µg/kg/day	> 35,000		2 B	
			Inhalation	Human	Influence on the neurobehavioral performance tested	2.6 mg/m ³	Inhalation (indoor)	17 µg/m ³	150			
					Inhalation (ambient)		1.9 µg/m ³	1,400				
20	50-29-3	p,p'-D D T	Oral	Human	Liver dysfunction	0.06 mg/kg/day	Oral	0.16 µg/kg/day	380		2 B	
			Inhalation	-	-	-	-	-	-	x		
21	60-57-1	Dieldrin	Oral	Human	Effect on 17-hydroxycorticosteroid in urine	0.02 mg/kg/day	Oral	< 0.015 µg/kg/day	> 1,300		3	
			Inhalation	-	-	-	-	-	-	x		
22	79-94-7	Tetrabromobisphenol A	-	-	-	-	-	-	-	x	-	
23	95-53-4	o-Toluidine	-	-	-	-	-	-	-	x	2 A	
24	108-88-3	Toluene	Oral	Rat	Increased weight of kidney and liver in male rats	22 mg/kg/day	Oral	< 0.0024 µg/kg/day	> 920,000		3	
			Inhalation	Human	Effect on neurobehavioral function	7.9 mg/m ³	Inhalation (indoor)	270 µg/m ³	29			
					Inhalation (ambient)		49 µg/m ³	160				
25	584-84-9	Toluene diisocyanate	Oral	-	-	-	-	-	-	x	2 B	
			Inhalation	Human	Sensitization	0 mg/m ³	Inhalation (indoor)	-	-	x		
					Inhalation (ambient)		-	-	x			
26	302-01-2	Hydrazine	Oral	-	-	-	-	-	-	x	2 B	
			Inhalation	Human	Increased subjective symptoms of having nightmares at night	0 mg/m ³	Oral # 2	0.024 µg/kg/day	38			
27	92-52-4	Biphenyl	Oral	Rat	Epithelial cell hyperplasia of the renal pelvis	3.8 mg/kg/day	Oral	< 0.40 µg/kg/day	> 950		-	
			Inhalation	-	-	-	-	-	-	x		
28	108-95-2	Phenol	Oral	Rat	Congestion of kidney, degeneration of tubule in renal papillae	1.2 mg/kg/day	Oral	4.0 µg/kg/day	30		3	
			Inhalation	Human	Irritative symptoms of the upper respiratory tract including cough and sputum, body weight loss	4.5 mg/m ³	Inhalation (indoor)	-	-	x		
					Inhalation (ambient)		0.60 µg/m ³	7,500				
29	117-81-7	Di (2-ethylhexyl) phthalate	Oral	Rat	Vacuolation of testicular Sertoli cells	3.7 mg/kg/day	Oral	44 µg/kg/day	8.4		3	
			Inhalation	-	-	-	-	-	-	x		
30	84-74-2	Di-n-butyl phthalate	Oral	Rat	Nipple and areola retention in male offspring	50 mg/kg/day	Oral	1.2 µg/kg/day	4,200		-	
			Inhalation	-	-	-	-	-	-	x		
31	131-11-3	Dimethylphthalate	-	-	-	-	-	-	-	x	-	
32	118-74-1	Hexachlorobenzene	Oral	Rat	Mitochondrial swelling, increased agranular endoplasmic reticulum	0.05 mg/kg/day	Oral	< 0.0040 µg/kg/day	> 1,300		2 B	
			Inhalation	-	-	-	-	-	-	x		
33	110-54-3	n-Hexane	Oral	-	-	-	-	-	-	-	x	-
			Inhalation	Human	Headache , abnormal sensation of limbs	1 mg/m ³	Inhalation (indoor)	24 µg/m ³	42			
					Inhalation (ambient)		17 µg/m ³	59				
34	76-44-8	Heptachlor	Oral	Dog	Hepatocellular swelling and the localization of granules in cells in the liver lobule zones	0.03 mg/kg/day	Oral	< 0.0040 µg/kg/day	> 630		2 B	
			Inhalation	-	-	-	-	-	-	x		
35	82-68-8	Pentachloronitrobenzene	Oral	Dog	Cholestatic liver damage	0.75 mg/kg/day	Oral	< 0.080 µg/kg/day	> 940		3	
			Inhalation	-	-	-	-	-	-	x		

36	87-86-5	Pentachlorophenol	Oral	Rat	Decrease in the neonatal survival rates and the body weight gain rates	3 mg/kg/day	Oral	< 0.20 µg/kg/day	> 1,500		2 B
			Inhalation	-	-	-	-	-	-	x	
37	50-00-0	Formaldehyde	Oral	Rat	Body weight loss, histologic alteration of gastric epithelium, renal necrosis	15 mg/kg/day	Oral	62 µg/kg/day	24		2 A
			Inhalation	Human	30-minute average value for preventing sensory stimulation (nose and throat irritation) in humans	0.1 mg/m ³	Inhalation (indoor)	230 µg/m ³	0.43		
							Inhalation (ambient)	5.5 µg/m ³	18		
38	108-90-7	Monochlorobenzene	Oral	Rat	Neoplastic nodule in liver	43 mg/kg/day	Oral	< 0.21 µg/kg/day	> 20,000		-
			Inhalation	Rat	Decreased GOT levels, liver and kidney weight increase, adrenocortical lesions	0.71 mg/m ³	Inhalation (indoor)	0.88 µg/m ³	81		
							Inhalation (ambient)	0.12 µg/m ³	590		
39	115-96-8	Phosphoric acid tris (2-chloroethyl) ester	Oral	Rat	Increased kidney and liver weight relative to body weight	16 mg/kg/day	Oral	< 0.21 µg/kg/day	> 7,600		3
			Inhalation	-	-	-	-	-	-	x	

Notes: 1) Estimated maximum exposure levels are, in principle, actually measured maximum levels.

2) Inhalation(indoor): exposure to indoor air through inhalation, inhalation (ambient): exposure to ambient air through inhalation

3) : No further assessment required at this time. : Further data collection required. : Potential candidate for detailed assessment.

Data used

X: Risk characterization impossible at present.

4) #1: Oral exposure level is derived from inhalation exposure data for assessment purpose.

() Data not used

#2: Oral exposure NOAEL is derived from inhalation exposure NOAEL for assessment purpose.

5) #3: Treated as reference data because the estimated maximum exposure level is limited to exposure through groundwater.

- No data

6) : Exposure level presented is those to Dieldrin and Aldline combined.

7) - : Indicates that the NOAEL values could not be established, or estimated maximum exposure levels were not obtained.