

Agency for Toxic Substances and Disease Registry
MINIMAL RISK LEVELS (MRLs)
 February 2013

| Name | Route | Dura- tion | MRL | Uncertainty Factors | Endpoint | Status | Cover Date | CAS Number |
|---------------|-------|---------------|-------------------|------------------------|----------|--------|---------------|---------------|
| ACENAPHTHENE | Oral | Int. | 0.6 mg/kg/day | 300 | Hepatic | Final | 08/95 | 83-32-9 |
| ACETONE | Inh. | Acute | 26 ppm | 9 | Neurol. | Final | 05/94 | 67-64-1 |
| | | Int. | 13 ppm | 100 | Neurol. | | | |
| | | Chr. | 13 ppm | 100 | Neurol. | | | |
| | Oral | Int. | 2 mg/kg/day | 100 | Hemato. | | | |
| ACROLEIN | Inh. | Acute | 0.003 ppm | 100 | Resp. | Final | 08/07 | 107-02-8 |
| | | Int. | 0.00004 ppm | 300 | Resp. | | | |
| | Oral | Int. | 0.004 mg/kg/day | 100 | Gastro. | | | |
| ACRYLAMIDE | Oral | Acute | 0.01 mg/kg/day | 30 | Repro. | Final | 12/12 | 79-06-1 |
| | | Int. | 0.001 mg/kg/day | 30 | Neurol. | | | |
| | | Chr. | 0.001 mg/kg/day | 30 | Neurol. | | | |
| ACRYLONITRILE | Inh. | Acute | 0.1 ppm | 10 | Neurol. | Final | 12/90 | 107-13-1 |
| | | Oral | Acute | 0.1 mg/kg/day | 100 | | | |
| | Oral | Int. | 0.01 mg/kg/day | 1000 | Repro. | | | |
| | | Chr. | 0.04 mg/kg/day | 100 | Hemato. | | | |
| ALDRIN | Oral | Acute | 0.002 mg/kg/day | 1000 | Develop. | Final | 09/02 | 309-00-2 |
| | | Chr. | 0.00003 mg/kg/day | 1000 | Hepatic | | | |
| ALUMINUM | Oral | Int. | 1.0 mg/kg/day | 30 | Neurol. | Final | 09/08 | 7429-90-5 |
| | | Chr. | 1.0 mg/kg/day | 90 | Neurol. | | | |
| AMERICIUM | Rad. | Acute | 4 mSv | 3 | Develop. | Final | 10/04 | 7440-35-9 |
| | | Chr. | 1 mSv/yr | 3 | Other | | | |
| AMMONIA | Inh. | Acute | 1.7 ppm | 30 | Resp. | Final | 10/04 | 7664-41-7 |
| | | Chr. | 0.1 ppm | 30 | Resp. | | | |
| ANTHRACENE | Oral | Int. | 10 mg/kg/day | 100 | Hepatic | Final | 08/95 | 120-12-7 |

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|--|------|-------|------------------|------|----------|-------|-------|-----------|
| ARSENIC | Oral | Acute | 0.005 mg/kg/day | 10 | Gastro. | Final | 08/07 | 7440-38-2 |
| | | Chr. | 0.0003 mg/kg/day | 3 | Dermal | | | |
| ATRAZINE | Oral | Acute | 0.01 mg/kg/day | 100 | Body Wt. | Final | 09/03 | 1912-24-9 |
| | | Int. | 0.003 mg/kg/day | 300 | Repro. | | | |
| BARIUM, SOLUBLE SALTS | Oral | Int. | 0.2 mg/kg/day | 100 | Renal | Final | 08/07 | 7440-39-3 |
| | | Chr. | 0.2 mg/kg/day | 100 | Renal | | | |
| BENZENE | Inh. | Acute | 0.009 ppm | 300 | Immuno. | Final | 08/07 | 71-43-2 |
| | | Int. | 0.006 ppm | 300 | Immuno. | | | |
| | | Chr. | 0.003 ppm | 10 | Immuno. | | | |
| | Oral | Chr. | 0.0005 mg/kg/day | 30 | Immuno. | | | |
| BERYLLIUM | Oral | Chr. | 0.002 mg/kg/day | 300 | Gastro. | Final | 09/02 | 7440-41-7 |
| BIS(2-CHLOROETHYL) ETHER | Inh. | Int. | 0.02 ppm | 1000 | Body Wt. | Final | 12/89 | 111-44-4 |
| BIS(CHLOROMETHYL) ETHER | Inh. | Int. | 0.0003 ppm | 100 | Resp. | Final | 12/89 | 542-88-1 |
| BORON | Inh. | Acute | 0.3 mg/m3 | 3 | Resp. | Final | 11/10 | 7440-42-8 |
| | Oral | Acute | 0.2 mg/kg/day | 100 | Develop. | | | |
| | | Int. | 0.2 mg/kg/day | 66 | Develop. | | | |
| BROMODICHLOROMETHANE | Oral | Acute | 0.04 mg/kg/day | 1000 | Hepatic | Final | 12/89 | 75-27-4 |
| | | Chr. | 0.02 mg/kg/day | 1000 | Renal | | | |
| BROMOFORM | Oral | Acute | 0.7 mg/kg/day | 100 | Hepatic | Final | 09/05 | 75-25-2 |
| | | Int. | 0.2 mg/kg/day | 300 | Hepatic | | | |
| | | Chr. | 0.02 mg/kg/day | 3000 | Hepatic | | | |
| BROMOMETHANE | Inh. | Acute | 0.05 ppm | 100 | Neurol. | Final | 09/92 | 74-83-9 |
| | | Int. | 0.05 ppm | 100 | Neurol. | | | |
| | | Chr. | 0.005 ppm | 100 | Neurol. | | | |
| | Oral | Int. | 0.003 mg/kg/day | 100 | Gastro. | | | |
| 2-BUTOXYETHANOL (ETHYLENE GLYCOL MONOBUTYL ETHER) | Inh. | Acute | 6 ppm | 9 | Hemato. | Final | 10/98 | 111-76-2 |
| | | Int. | 3 ppm | 9 | Hemato. | | | |
| | | Chr. | 0.2 ppm | 3 | Hemato. | | | |
| | Oral | Acute | 0.4 mg/kg/day | 90 | Hemato. | | | |
| | | Int. | 0.07 mg/kg/day | 1000 | Hepatic | | | |
| CADMIUM | Inh. | Acute | 0.00003 mg/m3 | 300 | Resp. | Final | 09/12 | 7440-43-9 |
| | | Chr. | 0.00001 mg/m3 | 9 | Renal | | | |

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| | Oral | Int. | 0.0005 mg/kg/day | 100 | Musculo. | | | |
| | | Chr. | 0.0001 mg/kg/day | 3 | Renal | | | |
| CARBON DISULFIDE | Inh. | Chr. | 0.3 ppm | 30 | Neurol. | Final | 08/96 | 75-15-0 |
| | Oral | Acute | 0.01 mg/kg/day | 300 | Hepatic | | | |
| CARBON TETRACHLORIDE | Inh. | Int. | 0.03 ppm | 30 | Hepatic | Final | 09/05 | 56-23-5 |
| | | Chr. | 0.03 ppm | 30 | Hepatic | | | |
| | Oral | Acute | 0.02 mg/kg/day | 300 | Hepatic | | | |
| | | Int. | 0.007 mg/kg/day | 100 | Hepatic | | | |
| CESIUM | Rad. | Acute | 4 mSv | 3 | Develop. | Final | 10/04 | 7440-46-2 |
| | | Chr. | 1 mSv/yr | 3 | Other | | | |
| CHLORDANE | Inh. | Int. | 0.0002 mg/m3 | 100 | Hepatic | Final | 05/94 | 57-74-9 |
| | | Chr. | 0.00002 mg/m3 | 1000 | Hepatic | | | |
| | Oral | Acute | 0.001 mg/kg/day | 1000 | Develop. | | | |
| | | Int. | 0.0006 mg/kg/day | 100 | Hepatic | | | |
| | | Chr. | 0.0006 mg/kg/day | 100 | Hepatic | | | |
| CHLORDECONE | Oral | Acute | 0.01 mg/kg/day | 100 | Neurol. | Final | 08/95 | 143-50-0 |
| | | Int. | 0.0005 mg/kg/day | 100 | Renal | | | |
| | | Chr. | 0.0005 mg/kg/day | 100 | Renal | | | |
| CHLORFENVINPHOS | Oral | Acute | 0.002 mg/kg/day | 1000 | Neurol. | Final | 09/97 | 470-90-6 |
| | | Int. | 0.002 mg/kg/day | 1000 | Immuno. | | | |
| | | Chr. | 0.0007 mg/kg/day | 1000 | Neurol. | | | |
| CHLORINE | Inh. | Acute | 0.06 ppm | 3 | Resp. | Final | 11/10 | 7782-50-5 |
| | | Int. | 0.002 ppm | 90 | Resp. | | | |
| | | Chr. | 0.00005 ppm | 30 | Resp. | | | |
| CHLORINE DIOXIDE | Inh. | Int. | 0.001 ppm | 300 | Resp. | Final | 10/04 | 10049-04-4 |
| CHLORITE | Oral | Int. | 0.1 mg/kg/day | 30 | Neurol. | Final | 10/04 | 7758-19-2 |
| CHLOROENZENE | Oral | Int. | 0.4 mg/kg/day | 100 | Hepatic | Final | 12/90 | 108-90-7 |
| CHLORODIBROMOMETHANE | Oral | Acute | 0.1 mg/kg/day | 300 | Hepatic | Final | 09/05 | 124-48-1 |
| | | Chr. | 0.09 mg/kg/day | 300 | Hepatic | | | |
| CHLOROETHANE | Inh. | Acute | 15 ppm | 100 | Develop. | Final | 12/98 | 75-00-3 |

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| CHLOROFORM | Inh. | Acute | 0.1 ppm | 30 | Hepatic | Final | 09/97 | 67-66-3 |
| | | Int. | 0.05 ppm | 300 | Hepatic | | | |
| | | Chr. | 0.02 ppm | 100 | Hepatic | | | |
| | Oral | Acute | 0.3 mg/kg/day | 100 | Hepatic | | | |
| | | Int. | 0.1 mg/kg/day | 100 | Hepatic | | | |
| | | Chr. | 0.01 mg/kg/day | 1000 | Hepatic | | | |
| CHLOROMETHANE | Inh. | Acute | 0.5 ppm | 100 | Neurol. | Final | 12/98 | 74-87-3 |
| | | Int. | 0.2 ppm | 300 | Hepatic | | | |
| | | Chr. | 0.05 ppm | 1000 | Neurol. | | | |
| 4-CHLOROPHENOL | Oral | Acute | 0.01 mg/kg/day | 100 | Hepatic | Final | 07/99 | 106-48-9 |
| CHLORPYRIFOS | Oral | Acute | 0.003 mg/kg/day | 10 | Neurol. | Final | 09/97 | 2921-88-2 |
| | | Int. | 0.003 mg/kg/day | 10 | Neurol. | | | |
| | | Chr. | 0.001 mg/kg/day | 100 | Neurol. | | | |
| CHROMIUM(III) SOLUBLE PARTICULATES | Inh. | Int. | 0.0001 mg/m3 | 300 | Resp. | Final | 09/12 | 16065-83-1 |
| CHROMIUM(III) INSOL. PARTICULATES | Inh. | Int. | 0.005 mg/m3 | 90 | Resp. | Final | 09/12 | 16065-83-1 |
| CHROMIUM(VI) | Oral | Int. | 0.005 mg/kg/day | 100 | Hemato. | Final | 09/12 | 18540-29-9 |
| | | Chr. | 0.0009 mg/kg/day | 100 | Gastro. | | | |
| CHROMIUM(VI), AEROSOL MISTS | Inh. | Int. | 0.000005 mg/m3 | 100 | Resp. | Final | 09/12 | 18540-29-9 |
| | | Chr. | 0.000005 mg/m3 | 100 | Resp. | | | |
| CHROMIUM(VI), PARTICULATES | Inh. | Int. | 0.0003 mg/m3 | 30 | Resp. | Final | 09/12 | 18540-29-9 |
| COBALT | Inh. | Chr. | 0.0001 mg/m3 | 10 | Resp. | Final | 10/04 | 7440-48-4 |
| | | Oral | Int. | 0.01 mg/kg/day | 100 | | | |
| | Rad. | Acute | 4 mSv | 3 | Develop. | | | |
| | | Chr. | 1 mSv/yr | 3 | Other | | | |
| COPPER | Oral | Acute | 0.01 mg/kg/day | 3 | Gastro. | Final | 10/04 | 7440-50-8 |
| | | Int. | 0.01 mg/kg/day | 3 | Gastro. | | | |
| CRESOLS | Oral | Int. | 0.1 mg/kg/day | 100 | Resp. | Final | 09/08 | 1319-77-3 |
| | | Chr. | 0.1 mg/kg/day | 1000 | Resp. | | | |
| CYANIDE, SODIUM | Oral | Int. | 0.05 mg/kg/day | 100 | Repro. | Final | 07/06 | 143-33-9 |
| CYHALOTHRIN | Oral | Acute | 0.01 mg/kg/day | 100 | Gastro. | Final | 09/03 | 68085-85-8 |
| | | Int. | 0.01 mg/kg/day | 100 | Gastro. | | | |

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| CYPERMETHRIN | Oral | Acute | 0.02 mg/kg/day | 100 | Neurol. | Final | 09/03 | 52315-07-8 |
| DDT, P,P'- | Oral | Acute | 0.0005 mg/kg/day | 1000 | Develop. | Final | 09/02 | 50-29-3 |
| | | Int. | 0.0005 mg/kg/day | 100 | Hepatic | | | |
| DIAZINON | Inh. | Int. | 0.01 mg/m3 | 30 | Neurol. | Final | 09/08 | 333-41-5 |
| | | Oral | Acute | 0.006 mg/kg/day | 100 | | | |
| | | Int. | 0.002 mg/kg/day | 100 | Neurol. | | | |
| | | Chr. | 0.0007 mg/kg/day | 100 | Neurol. | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | Inh. | Int. | 0.0002 ppm | 100 | Repro. | Final | 09/92 | 96-12-8 |
| | | Oral | Int. | 0.002 mg/kg/day | 1000 | | | |
| DI-N-BUTYL PHTHALATE | Oral | Acute | 0.5 mg/kg/day | 100 | Develop. | Final | 09/01 | 84-74-2 |
| 1,2-DICHLOROBENZENE | Oral | Acute | 0.7 mg/kg/day | 100 | Hepatic | Final | 07/06 | 95-50-1 |
| | | Int. | 0.6 mg/kg/day | 100 | Hepatic | | | |
| | | Chr. | 0.3 mg/kg/day | 100 | Renal | | | |
| 1,3-DICHLOROBENZENE | Oral | Acute | 0.4 mg/kg/day | 100 | Hepatic | Final | 07/06 | 541-73-1 |
| | | Int. | 0.02 mg/kg/day | 100 | Endocr. | | | |
| 1,4-DICHLOROBENZENE | Inh. | Acute | 2 ppm | 10 | Ocular | Final | 07/06 | 106-46-7 |
| | | Int. | 0.2 ppm | 100 | Hepatic | | | |
| | | Chr. | 0.01 ppm | 30 | Resp. | | | |
| | Oral | Int. | 0.07 mg/kg/day | 100 | Hepatic | | | |
| | | Chr. | 0.07 mg/kg/day | 100 | Hepatic | | | |
| 1,2-DICHLOROETHANE | Inh. | Chr. | 0.6 ppm | 90 | Hepatic | Final | 09/01 | 107-06-2 |
| | | Oral | Int. | 0.2 mg/kg/day | 300 | | | |
| 1,1-DICHLOROETHENE | Inh. | Int. | 0.02 ppm | 100 | Hepatic | Final | 05/94 | 75-35-4 |
| | | Oral | Chr. | 0.009 mg/kg/day | 1000 | | | |
| 1,2-DICHLOROETHENE, CIS- | Oral | Acute | 1 mg/kg/day | 100 | Hemato. | Final | 08/96 | 156-59-2 |
| | | Int. | 0.3 mg/kg/day | 100 | Hemato. | | | |
| 1,2-DICHLOROETHENE, TRANS- | Inh. | Acute | 0.2 ppm | 1000 | Hepatic | Final | 08/96 | 156-60-5 |
| | | Int. | 0.2 ppm | 1000 | Hepatic | | | |
| | Oral | Int. | 0.2 mg/kg/day | 100 | Hepatic | | | |
| 2,4-DICHLOROPHENOL | Oral | Int. | 0.003 mg/kg/day | 100 | Immuno. | Final | 07/99 | 120-83-2 |

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| 1,2-DICHLOROPROPANE | Inh. | Acute | 0.05 ppm | 1000 | Resp. | Final | 12/89 | 78-87-5 |
| | | Int. | 0.007 ppm | 1000 | Resp. | | | |
| | Oral | Acute | 0.1 mg/kg/day | 1000 | Neurol. | | | |
| Int. | | 0.07 mg/kg/day | 1000 | Hemato. | | | | |
| Chr. | | 0.09 mg/kg/day | 1000 | Hepatic | | | | |
| 1,3-DICHLOROPROPENE | Inh. | Int. | 0.008 ppm | 30 | Resp. | Final | 09/08 | 542-75-6 |
| | | Chr. | 0.007 ppm | 30 | Resp. | | | |
| | Oral | Int. | 0.04 mg/kg/day | 100 | Gastro. | | | |
| | | Chr. | 0.03 mg/kg/day | 100 | Gastro. | | | |
| 2,3-DICHLOROPROPENE | Inh. | Acute | 0.002 ppm | 90 | Resp. | Final | 09/08 | 78-88-6 |
| DICHLORVOS | Inh. | Acute | 0.002 ppm | 100 | Neurol. | Final | 09/97 | 62-73-7 |
| | | Int. | 0.0003 ppm | 100 | Neurol. | | | |
| | | Chr. | 0.00006 ppm | 100 | Neurol. | | | |
| | Oral | Acute | 0.004 mg/kg/day | 1000 | Neurol. | | | |
| | | Int. | 0.003 mg/kg/day | 10 | Neurol. | | | |
| Chr. | 0.0005 mg/kg/day | 100 | Neurol. | | | | | |
| DIELDRIN | Oral | Int. | 0.0001 mg/kg/day | 100 | Neurol. | Final | 09/02 | 60-57-1 |
| | | Chr. | 0.00005 mg/kg/day | 100 | Hepatic | | | |
| DI(2-ETHYLHEXYL)PHTHALATE | Oral | Int. | 0.1 mg/kg/day | 100 | Repro. | Final | 09/02 | 117-81-7 |
| | | Chr. | 0.06 mg/kg/day | 100 | Repro. | | | |
| DIETHYL PHTHALATE | Oral | Acute | 7 mg/kg/day | 300 | Repro. | Final | 06/95 | 84-66-2 |
| | | Int. | 6 mg/kg/day | 300 | Hepatic | | | |
| DIISOPROPYL METHYLPHOSPHONATE (DIMP) | Oral | Int. | 0.8 mg/kg/day | 100 | Hemato. | Final | 10/98 | 1445-75-6 |
| | | Chr. | 0.6 mg/kg/day | 100 | Hemato. | | | |
| DIMETHYLARSINIC ACID (DMA) | Oral | Chr. | 0.02 mg/kg/day | 100 | Renal | Final | 08/07 | 75-60-5 |
| 1,1-DIMETHYLHYDRAZINE | Inh. | Int. | 0.0002 ppm | 300 | Hepatic | Final | 09/97 | 57-14-7 |
| 1,2-DIMETHYLHYDRAZINE | Oral | Int. | 0.0008 mg/kg/day | 1000 | Hepatic | Final | 09/97 | 540-73-8 |
| 1,3-DINITROBENZENE | Oral | Acute | 0.008 mg/kg/day | 100 | Repro. | Final | 06/95 | 99-65-0 |
| | | Int. | 0.0005 mg/kg/day | 1000 | Hemato. | | | |
| 4,6-DINITRO-O-CRESOL | Oral | Acute | 0.004 mg/kg/day | 100 | Neurol. | Final | 08/95 | 534-52-1 |
| | | Int. | 0.004 mg/kg/day | 100 | Neurol. | | | |

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| 2,4-DINITROPHENOL | Oral | Acute | 0.01 mg/kg/day | 100 | Body Wt. | Final | 08/95 | 51-28-5 |
| 2,4-DINITROTOLUENE | Oral | Acute | 0.05 mg/kg/day | 100 | Neurol. | Final | 12/98 | 121-14-2 |
| | | Int. | 0.002 mg/kg/day | 100 | Hemato. | | | |
| 2,6-DINITROTOLUENE | Oral | Int. | 0.004 mg/kg/day | 1000 | Hemato. | Final | 12/98 | 606-20-2 |
| DI-N-OCTYL PHTHALATE | Oral | Acute | 3 mg/kg/day | 300 | Hepatic | Final | 09/97 | 117-84-0 |
| | | Int. | 0.4 mg/kg/day | 100 | Hepatic | | | |
| 1,4-DIOXANE | Inh. | Acute | 2 ppm | 30 | Ocular | Final | 04/12 | 123-91-1 |
| | | Int. | 0.2 ppm | 30 | Resp. | | | |
| | | Chr. | 0.03 ppm | 300 | Resp. | | | |
| | Oral | Acute | 5 mg/kg/day | 100 | Develop. | | | |
| | | Int. | 0.5 mg/kg/day | 100 | Hepatic | | | |
| | | Chr. | 0.1 mg/kg/day | 100 | Hepatic | | | |
| DISULFOTON | Inh. | Acute | 0.006 mg/m3 | 30 | Neurol. | Final | 08/95 | 298-04-4 |
| | | Int. | 0.0002 mg/m3 | 30 | Neurol. | | | |
| | Oral | Acute | 0.001 mg/kg/day | 100 | Neurol. | | | |
| | | Int. | 0.00009 mg/kg/day | 100 | Develop. | | | |
| ENDOSULFAN | Oral | Int. | 0.005 mg/kg/day | 100 | Immuno. | Final | 09/00 | 115-29-7 |
| | | Chr. | 0.002 mg/kg/day | 100 | Hepatic | | | |
| ENDRIN | Oral | Int. | 0.002 mg/kg/day | 100 | Neurol. | Final | 08/96 | 72-20-8 |
| | | Chr. | 0.0003 mg/kg/day | 100 | Neurol. | | | |
| ETHION | Oral | Acute | 0.002 mg/kg/day | 30 | Neurol. | Final | 09/00 | 563-12-2 |
| | | Int. | 0.002 mg/kg/day | 30 | Neurol. | | | |
| | | Chr. | 0.0004 mg/kg/day | 150 | Neurol. | | | |
| ETHYLBENZENE | Inh. | Acute | 5 ppm | 30 | Neurol. | Final | 11/10 | 100-41-4 |
| | | Int. | 2 ppm | 30 | Neurol. | | | |
| | | Chr. | 0.06 ppm | 300 | Renal | | | |
| | Oral | Int. | 0.4 mg/kg/day | 30 | Hepatic | | | |
| ETHYLENE GLYCOL | Inh. | Acute | 2 mg/m3 | 10 | Resp. | Final | 11/10 | 107-21-1 |
| | | Acute | 0.8 mg/kg/day | 100 | Develop. | | | |
| | Oral | Int. | 0.8 mg/kg/day | 100 | Develop. | | | |
| ETHYLENE OXIDE | Inh. | Int. | 0.09 ppm | 100 | Renal | Final | 12/90 | 75-21-8 |

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| FLUORANTHENE | Oral | Int. | 0.4 mg/kg/day | 300 | Hepatic | Final | 08/95 | 206-44-0 |
| FLUORENE | Oral | Int. | 0.4 mg/kg/day | 300 | Hepatic | Final | 08/95 | 86-73-7 |
| FLUORIDE, SODIUM | Oral | Chr. | 0.05 mg/kg/day | 3 | Musculo. | Final | 09/03 | 7681-49-4 |
| FLUORINE | Inh. | Acute | 0.01 ppm | 10 | Resp. | Final | 09/03 | 7782-41-4 |
| FORMALDEHYDE | Inh. | Acute | 0.04 ppm | 9 | Resp. | Final | 07/99 | 50-00-0 |
| | | Int. | 0.03 ppm | 30 | Resp. | | | |
| | | Chr. | 0.008 ppm | 30 | Resp. | | | |
| | Oral | Int. | 0.3 mg/kg/day | 100 | Gastro. | | | |
| | | Chr. | 0.2 mg/kg/day | 100 | Gastro. | | | |
| FUEL OIL NO.2 | Inh. | Acute | 0.02 mg/m3 | 1000 | Neurol. | Final | 06/95 | 68476-30-2 |
| GUTHION (AZINPHOS-METHYL) | Inh. | Acute | 0.02 mg/m3 | 30 | Neurol. | Final | 09/08 | 86-50-0 |
| | | Int. | 0.01 mg/m3 | 30 | Neurol. | | | |
| | | Chr. | 0.01 mg/m3 | 30 | Neurol. | | | |
| | Oral | Acute | 0.01 mg/kg/day | 100 | Neurol. | | | |
| | | Int. | 0.003 mg/kg/day | 100 | Neurol. | | | |
| Chr. | 0.003 mg/kg/day | 100 | Neurol. | | | | | |
| HEPTACHLOR | Oral | Acute | 0.0006 mg/kg/day | 3000 | Repro. | Final | 08/07 | 76-44-8 |
| | | Int. | 0.0001 mg/kg/day | 300 | Immuno. | | | |
| HEXACHLOROBENZENE | Oral | Acute | 0.008 mg/kg/day | 300 | Develop. | Final | 09/02 | 118-74-1 |
| | | Int. | 0.0001 mg/kg/day | 90 | Repro. | | | |
| | | Chr. | 0.00005 mg/kg/day | 300 | Develop. | | | |
| HEXACHLOROBUTADIENE | Oral | Int. | 0.0002 mg/kg/day | 1000 | Renal | Final | 05/94 | 87-68-3 |
| ALPHA-HEXACHLOROCYCLOHEXANE | Oral | Chr. | 0.008 mg/kg/day | 100 | Hepatic | Final | 09/05 | 319-84-6 |
| BETA-HEXACHLOROCYCLOHEXANE | Oral | Acute | 0.05 mg/kg/day | 100 | Neurol. | Final | 09/05 | 319-85-7 |
| | | Int. | 0.0006 mg/kg/day | 300 | Hepatic | | | |
| GAMMA-HEXACHLOROCYCLOHEXANE | Oral | Acute | 0.003 mg/kg/day | 300 | Develop. | Final | 09/05 | 58-89-9 |
| | | Int. | 0.00001 mg/kg/day | 1000 | Immuno. | | | |
| HEXACHLOROCYCLOPENTADIENE | Inh. | Int. | 0.01 ppm | 30 | Resp. | Final | 07/99 | 77-47-4 |
| | | Chr. | 0.0002 ppm | 90 | Resp. | | | |
| | Oral | Int. | 0.1 mg/kg/day | 100 | Renal | | | |

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| HEXACHLOROETHANE | Inh. | Acute | 6 ppm | 30 | Neurol. | Final | 09/97 | 67-72-1 |
| | | Int. | 6 ppm | 30 | Neurol. | | | |
| | Oral | Acute | 1 mg/kg/day | 100 | Hepatic | | | |
| | | Int. | 0.01 mg/kg/day | 100 | Hepatic | | | |
| HEXAMETHYLENE DIISOCYANATE | Inh. | Int. | 0.00003 ppm | 30 | Resp. | Final | 10/98 | 822-06-0 |
| | | Chr. | 0.00001 ppm | 90 | Resp. | | | |
| N-HEXANE | Inh. | Chr. | 0.6 ppm | 100 | Neurol. | Final | 07/99 | 110-54-3 |
| HMX (CYCLOTETRAMETHYLENE TETRANITRAMINE) | Oral | Acute | 0.1 mg/kg/day | 1000 | Neurol. | Final | 09/97 | 2691-41-0 |
| | | Int. | 0.05 mg/kg/day | 1000 | Hepatic | | | |
| HYDRAZINE | Inh. | Int. | 0.004 ppm | 300 | Hepatic | Final | 09/97 | 302-01-2 |
| HYDROGEN FLUORIDE | Inh. | Acute | 0.02 ppm | 30 | Resp. | Final | 09/03 | 7664-39-3 |
| HYDROGEN SULFIDE | Inh. | Acute | 0.07 ppm | 27 | Resp. | Final | 07/06 | 7783-06-4 |
| | | Int. | 0.02 ppm | 30 | Resp. | | | |
| IODIDE | Oral | Acute | 0.01 mg/kg/day | 1 | Endocr. | Final | 10/04 | 7553-56-2 |
| | | Chr. | 0.01 mg/kg/day | 1 | Endocr. | | | |
| IONIZING RADIATION, N.O.S. | Rad. | Acute | 4 mSv | 3 | Neurol. | Final | 09/99 | HZ1800-45-T |
| | | Chr. | 1 mSv/yr | 3 | Other | | | |
| ISOPHORONE | Oral | Int. | 3 mg/kg/day | 100 | Other | Final | 12/89 | 78-59-1 |
| | | Chr. | 0.2 mg/kg/day | 1000 | Hepatic | | | |
| JP-4 | Inh. | Int. | 9 mg/m3 | 300 | Hepatic | Final | 06/95 | 50815-00-4 |
| JP-5/JP-8 | Inh. | Int. | 3 mg/m3 | 300 | Hepatic | Final | 10/98 | HZ0600-26-T |
| JP-7 | Inh. | Chr. | 0.3 mg/m3 | 300 | Hepatic | Final | 06/95 | HZ0600-22-T |
| KEROSENE | Inh. | Int. | 0.01 mg/m3 | 1000 | Hepatic | Final | 06/95 | 8008-20-6 |
| MALATHION | Inh. | Acute | 0.2 mg/m3 | 100 | Neurol. | Final | 09/03 | 121-75-5 |
| | | Int. | 0.02 mg/m3 | 1000 | Resp. | | | |
| | Oral | Int. | 0.02 mg/kg/day | 10 | Neurol. | | | |
| | | Chr. | 0.02 mg/kg/day | 100 | Neurol. | | | |
| MANGANESE, RESPIRABLE | Inh. | Chr. | 0.3 ug/m3 | 100 | Neurol. | Final | 09/12 | 7439-96-5 |

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|------------------------------------|------|-------|------------------|---------------|----------|-------|-------|------------|---------|
| MERCURIC CHLORIDE | Oral | Acute | 0.007 mg/kg/day | 100 | Renal | Final | 03/99 | 7487-94-7 | |
| | | Int. | 0.002 mg/kg/day | 100 | Renal | | | | |
| MERCURY | Inh. | Chr. | 0.0002 mg/m3 | 30 | Neurol. | Final | 03/99 | 7439-97-6 | |
| METHOXYCHLOR | Oral | Int. | 0.005 mg/kg/day | 1000 | Repro. | Draft | 09/00 | 72-43-5 | |
| 4,4'-METHYLENEBIS(2-CHLOROANILINE) | Oral | Chr. | 0.003 mg/kg/day | 3000 | Hepatic | Final | 05/94 | 101-14-4 | |
| METHYLENE CHLORIDE | Inh. | Acute | 0.6 ppm | 100 | Neurol. | Final | 09/00 | 75-09-2 | |
| | | Int. | 0.3 ppm | 90 | Hepatic | | | | |
| | | Chr. | 0.3 ppm | 30 | Hepatic | | | | |
| | Oral | Acute | 0.2 mg/kg/day | 100 | Neurol. | | | | |
| | | Chr. | 0.06 mg/kg/day | 100 | Hepatic | | | | |
| | | | | | | | | | |
| 4,4'-METHYLENEDIANILINE | Oral | Acute | 0.2 mg/kg/day | 300 | Hepatic | Final | 10/98 | 101-77-9 | |
| | | Int. | 0.08 mg/kg/day | 100 | Hepatic | | | | |
| METHYLMERCURY | Oral | Chr. | 0.0003 mg/kg/day | 4.5 | Develop. | Final | 03/99 | 22967-92-6 | |
| 1-METHYLNAPHTHALENE | Oral | Chr. | 0.07 mg/kg/day | 1000 | Resp. | Final | 09/05 | 90-12-0 | |
| 2-METHYLNAPHTHALENE | Oral | Chr. | 0.04 mg/kg/day | 100 | Resp. | Final | 09/05 | 91-57-6 | |
| METHYL PARATHION | Oral | Int. | 0.0007 mg/kg/day | 300 | Neurol. | Final | 09/01 | 298-00-0 | |
| | | Chr. | 0.0003 mg/kg/day | 100 | Hemato. | | | | |
| METHYL-T-BUTYL ETHER | Inh. | Acute | 2 ppm | 100 | Neurol. | Final | 08/96 | 1634-04-4 | |
| | | Int. | 0.7 ppm | 100 | Neurol. | | | | |
| | | Chr. | 0.7 ppm | 100 | Renal | | | | |
| | Oral | Acute | 0.4 mg/kg/day | 100 | Neurol. | | | | |
| | | Int. | 0.3 mg/kg/day | 300 | Hepatic | | | | |
| | | | | | | | | | |
| MIREX | Oral | Chr. | 0.0008 mg/kg/day | 100 | Hepatic | Final | 08/95 | 2385-85-5 | |
| MONOMETHYLARSONIC ACID (MMA) | Oral | Int. | 0.1 mg/kg/day | 100 | Gastro. | Final | 08/07 | 124-58-3 | |
| | | Chr. | 0.01 mg/kg/day | 100 | Renal | | | | |
| NAPHTHALENE | Inh. | Chr. | 0.0007 ppm | 300 | Resp. | Final | 09/05 | 91-20-3 | |
| | | Oral | Acute | 0.6 mg/kg/day | 90 | | | | Neurol. |
| | | Int. | 0.6 mg/kg/day | 90 | Neurol. | | | | |
| N-NITROSODI-N-PROPYLAMINE | Oral | Acute | 0.095 mg/kg/day | 100 | Hepatic | Final | 12/89 | 621-64-7 | |

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|--|------|-------|-------------------|------|----------|-------|-------|-------------|
| NICKEL | Inh. | Int. | 0.0002 mg/m3 | 30 | Resp. | Final | 09/05 | 7440-02-0 |
| | | Chr. | 0.00009 mg/m3 | 30 | Resp. | | | |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN | Oral | Acute | 0.001 ug/kg/day | 3000 | Immuno. | Final | 05/94 | 57117-31-4 |
| | | Int. | 0.00003 ug/kg/day | 3000 | Hepatic | | | |
| PENTACHLOROPHENOL | Oral | Acute | 0.005 mg/kg/day | 1000 | Develop. | Final | 09/01 | 87-86-5 |
| | | Int. | 0.001 mg/kg/day | 1000 | Repro. | | | |
| | | Chr. | 0.001 mg/kg/day | 1000 | Endocr. | | | |
| PERCHLORATES | Oral | Chr. | 0.0007 mg/kg/day | 10 | Endocr. | Final | 08/08 | 7778-74-7 |
| PERMETHRIN | Oral | Acute | 0.3 mg/kg/day | 100 | Neurol. | Final | 09/03 | 52645-53-1 |
| | | Int. | 0.2 mg/kg/day | 100 | Neurol. | | | |
| PHENOL | Oral | Acute | 1 mg/kg/day | 100 | Body Wt. | Final | 09/08 | 108-95-2 |
| PHOSPHORUS, WHITE | Inh. | Acute | 0.02 mg/m3 | 30 | Resp. | Final | 09/97 | 7723-14-0 |
| | Oral | Int. | 0.0002 mg/kg/day | 100 | Repro. | | | |
| POLYBROMINATED BIPHENYLS (PBBs) | Oral | Acute | 0.01 mg/kg/day | 100 | Endocr. | Final | 10/04 | 36355-01-8 |
| POLYBROMINATED DIPHENYL ETHERS (PBDEs), LOWER BROMINATED | Inh | Int. | 0.006 mg/m3 | 90 | Endocr. | Final | 10/04 | 32534-81-9 |
| | Oral | Acute | 0.03 mg/kg/day | 30 | Endocr. | | | 32536-52-0 |
| | | Int. | 0.007 mg/kg/day | 300 | Hepatic | | | |
| PBDEs, DECABROMINATED | Oral | Int. | 10 mg/kg/day | 100 | Develop. | Final | 10/04 | 1163-19-5 |
| POLYCHLORINATED BIPHENYLS (PCBs) (Aroclor 1254) | Oral | Int. | 0.03 ug/kg/day | 300 | Neurol. | Final | 11/00 | 11097-69-1 |
| | | Chr. | 0.02 ug/kg/day | 300 | Immuno. | | | |
| PROPYLENE GLYCOL | Inh. | Int. | 0.009 ppm | 1000 | Resp. | Final | 09/97 | 57-55-6 |
| PROPYLENE GLYCOL DINITRATE | Inh. | Acute | 0.003 ppm | 10 | Neurol. | Final | 06/95 | 6423-43-4 |
| | | Int. | 0.00004 ppm | 1000 | Hemato. | | | |
| | | Chr. | 0.00004 ppm | 1000 | Hemato. | | | |
| RDX (Cyclonite) | Oral | Acute | 0.2 mg/kg/day | 30 | Neurol. | Final | 01/12 | 121-82-4 |
| | | Int. | 0.1 mg/kg/day | 30 | Neurol. | | | |
| | | Chr. | 0.1 mg/kg/day | 30 | Neurol. | | | |
| REFRACTORY CERAMIC FIBERS | Inh. | Chr. | 0.03 fibers/cc | 30 | Resp. | Final | 10/04 | HZ0900-26-T |
| SELENIUM | Oral | Chr. | 0.005 mg/kg/day | 3 | Dermal | Final | 09/03 | 7782-49-2 |

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|-------------------------------------|------|-------|--------------------|------|----------|-------|-------|-----------|
| STRONTIUM | Oral | Int. | 2 mg/kg/day | 30 | Musculo. | Final | 10/04 | 7440-24-6 |
| STYRENE | Inh. | Acute | 5 ppm | 10 | Neurol. | Final | 11/10 | 100-42-5 |
| | | Chr. | 0.2 ppm | 30 | Neurol. | | | |
| | Oral | Acute | 0.1 mg/kg/day | 1000 | Neurol. | | | |
| SULFUR DIOXIDE | Inh. | Acute | 0.01 ppm | 9 | Resp. | Final | 12/98 | 7446-09-5 |
| SULFUR MUSTARD | Inh. | Acute | 0.0007 mg/m3 | 30 | Ocular | Final | 09/03 | 505-60-2 |
| | | Int. | 0.00002 mg/m3 | 30 | Ocular | | | |
| | Oral | Acute | 0.5 ug/kg/day | 1000 | Develop. | | | |
| | | Int. | 0.07 ug/kg/day | 300 | Gastro. | | | |
| 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN | Oral | Acute | 0.0002 ug/kg/day | 21 | Immuno. | Final | 12/98 | 1746-01-6 |
| | | Int. | 0.00002 ug/kg/day | 30 | Lymphor. | | | |
| | | Chr. | 0.000001 ug/kg/day | 90 | Develop. | | | |
| 1,1,2,2-TETRACHLOROETHANE | Oral | Int. | 0.5 mg/kg/day | 100 | Hepatic | Final | 09/08 | 79-34-5 |
| TETRACHLOROETHYLENE | Inh. | Acute | 0.2 ppm | 10 | Neurol. | Final | 09/97 | 127-18-4 |
| | | Chr. | 0.04 ppm | 100 | Neurol. | | | |
| | Oral | Acute | 0.05 mg/kg/day | 100 | Develop. | | | |
| TIN, INORGANIC | Oral | Int. | 0.3 mg/kg/day | 100 | Hemato. | Final | 09/05 | 7440-31-5 |
| TIN, DIBUTYL-, DICHLORIDE | Oral | Int. | 0.005 mg/kg/day | 1000 | Immuno. | Final | 09/05 | 683-18-1 |
| TIN, TRIBUTYL-, OXIDE | Oral | Int. | 0.0003 mg/kg/day | 100 | Immuno. | Final | 09/05 | 56-35-9 |
| | | Chr. | 0.0003 mg/kg/day | 100 | Immuno. | | | |
| TITANIUM TETRACHLORIDE | Inh. | Int. | 0.01 mg/m3 | 90 | Resp. | Final | 09/97 | 7550-45-0 |
| | | Chr. | 0.0001 mg/m3 | 90 | Resp. | | | |
| TOLUENE | Inh. | Acute | 1 ppm | 10 | Neurol. | Final | 09/00 | 108-88-3 |
| | | Chr. | 0.08 ppm | 100 | Neurol. | | | |
| | Oral | Acute | 0.8 mg/kg/day | 300 | Neurol. | | | |
| | | Int. | 0.02 mg/kg/day | 300 | Neurol. | | | |
| TOXAPHENE | Oral | Acute | 0.05 mg/kg/day | 100 | Neurol. | Draft | 09/10 | 8001-35-2 |
| | | Int. | 0.002 mg/kg/day | 100 | Immuno. | | | |
| TRIBUTYL PHOSPHATE (TnBP) | Oral | Acute | 1.1 mg/kg/day | 100 | Body Wt. | Final | 09/12 | 126-73-8 |
| | | Int. | 0.08 mg/kg/day | 100 | Renal | | | |

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|---|------|-------|------------------|------|----------|----------|-------|------------|
| | | Chr. | 0.08 mg/kg/day | 100 | Renal | | | |
| 1,2,4-TRICHLOROBENZENE | Oral | Int. | 0.1 mg/kg/day | 100 | Hepatic | Draft | 9/10 | 120-82-1 |
| | | Chr. | 0.1 mg/kg/day | 100 | Hepatic | | | |
| 1,1,1-TRICHLOROETHANE | Inh. | Acute | 2 ppm | 100 | Neurol. | Final | 07/06 | 71-55-6 |
| | | Int. | 0.7 ppm | 100 | Neurol. | | | |
| | Oral | Int. | 20 mg/kg/day | 100 | Body Wt. | | | |
| 1,1,2-TRICHLOROETHANE | Oral | Acute | 0.3 mg/kg/day | 100 | Neurol. | Final | 12/89 | 79-00-5 |
| | | Int. | 0.04 mg/kg/day | 100 | Hepatic | | | |
| TRICHLOROETHYLENE | Inh. | Chr. | 0.0004 ppm | 10 | Develop. | Addendum | 01/13 | 79-01-6 |
| | | | | 100 | Immuno. | | | |
| | Oral | Chr. | 0.0005 mg/kg/day | 10 | Develop. | | | |
| | | | | 100 | Immuno. | | | |
| | | | | 1000 | Immuno. | | | |
| 1,2,3-TRICHLOROPROPANE | Inh. | Acute | 0.0003 ppm | 100 | Resp. | Final | 09/92 | 96-18-4 |
| | Oral | Int. | 0.08 mg/kg/day | 100 | Hepatic | | | |
| TRICRESYL PHOSPHATE (TCP) | Oral | Int. | 0.04 mg/kg/day | 100 | Reprod. | Final | 09/12 | 1330-78-5 |
| | | Chr. | 0.02 mg/kg/day | 100 | Reprod. | | | |
| 2,4,6-TRINITROTOLUENE | Oral | Int. | 0.0005 mg/kg/day | 1000 | Hepatic | Final | 06/95 | 118-96-7 |
| TRIS(2-BUTOXYETHYL) PHOSPHATE (TBEP) | Oral | Acute | 4.8 mg/kg/day | 100 | Body Wt. | Final | 09/12 | 78-51-3 |
| | | Int. | 0.09 mg/kg/day | 100 | Hepatic | | | |
| TRIS(2-CHLOROETHYL) PHOSPHATE (TCEP) | Oral | Int. | 0.6 mg/kg/day | 100 | Neurol. | Final | 09/12 | 115-96-8 |
| | | Chr. | 0.2 mg/kg/day | 100 | Renal | | | |
| TRIS(1,3-DICHLORO-2-PROPYL) PHOSPHATE (TDCP) | Oral | Int. | 0.05 mg/kg/day | 100 | Renal | Final | 09/12 | 13674-87-8 |
| | | Chr. | 0.02 mg/kg/day | 100 | Renal | | | |
| URANIUM, SOLUBLE SALTS | Inh. | Int. | 0.0001 mg/m3 | 300 | Renal | Draft | 05/11 | 7440-61-1 |
| | | Chr. | 0.00004 mg/m3 | 100 | Renal | | | |
| | Oral | Acute | 0.002 mg/kg/day | 100 | Develop. | | | |
| | | Int. | 0.0002 mg/kg/day | 300 | Renal | | | |
| URANIUM, INSOLUBLE COMPOUNDS | Inh. | Int. | 0.002 mg/m3 | 100 | Renal | Draft | 05/11 | 7440-61-1 |
| | | Chr. | 0.0008 mg/m3 | 1000 | Resp. | | | |

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|----------------|------|-------|-----------------|------|----------|-------|-------|-----------|
| VANADIUM | Inh. | Acute | 0.0008 mg/m3 | 90 | Resp. | Final | 09/12 | 7440-62-2 |
| | | Chr. | 0.0001 mg/m3 | 30 | Resp. | | | |
| | Oral | Int. | 0.01 mg/kg/day | 10 | Hemato. | | | |
| VINYL ACETATE | Inh. | Int. | 0.01 ppm | 100 | Resp. | Final | 07/92 | 108-05-4 |
| VINYL CHLORIDE | Inh. | Acute | 0.5 ppm | 30 | Develop. | Final | 07/06 | 75-01-4 |
| | | Int. | 0.03 ppm | 30 | Hepatic | | | |
| | Oral | Chr. | 0.003 mg/kg/day | 30 | Hepatic | | | |
| XYLENES, MIXED | Inh. | Acute | 2 ppm | 30 | Neurol. | Final | 08/07 | 1330-20-7 |
| | | Int. | 0.6 ppm | 90 | Neurol. | | | |
| | | Chr. | 0.05 ppm | 300 | Neurol. | | | |
| | Oral | Acute | 1 mg/kg/day | 100 | Neurol. | | | |
| | | Int. | 0.4 mg/kg/day | 1000 | Neurol. | | | |
| | | Chr. | 0.2 mg/kg/day | 1000 | Neurol. | | | |
| ZINC | Oral | Int. | 0.3 mg/kg/day | 3 | Hemato. | Final | 09/05 | 7440-66-6 |
| | | Chr. | 0.3 mg/kg/day | 3 | Hemato. | | | |

Total number of MRLs: 399

For Duration, Acute = 1 to 14 days, Intermediate = 15 to 364 days, and Chronic = 1 year or longer.

For general information on ATSDR Minimal Risk Levels, see www.atsdr.cdc.gov/mrls.

For more information on a specific MRL, please refer to our Toxicological Profiles, particularly Appendix A of Profiles written after 1995.

The Profiles can be found online at www.atsdr.cdc.gov or ordered via cdcinfo@cdc.gov or 1-800-CDC-INFO.