

**Table 4-30**  
**Fate and Transport Properties**  
**for Selected Organic Compounds**

Chemical	Water Solubility (mg/l)	Vapor Pressure (mm Hg)	Henry's Law Constant (atm·m <sup>3</sup> /mol)	Koc (ml/g)	Kow
<b>Polychlorinated Biphenyls (PCBs) (Note 1)</b>					
Aroclor 1016	4.20E-01	4.00E-04	2.40E+04	2.90E-04	5.30E+05
Aroclor 1221	1.50E+01	6.70E-03	1.23E+04	3.50E-03	NA
Aroclor 1232	1.45E+00	4.06E-03	1.58E+03	NA	NA
Aroclor 1242	2.40E-01	4.10E-04	1.29E+04	5.60E-04	NA
Aroclor 1248	5.40E-02	4.90E-04	5.62E+05	3.50E-03	NA
Aroclor 1254	1.20E-02	7.70E-05	1.07E+06	2.70E-03	4.25E+04
Aroclor 1260	2.70E-03	4.10E-05	1.38E+07	7.10E-03	NA
<b>Pesticides (Note 1)</b>					
Dieldrin	1.95E-01	1.78E-07	4.58E-07	1.70E+03	3.16E+03
DDT	5.00E-03	5.50E-06	5.13E-04	2.43E+05	1.55E+06
Endrin	2.50E-01	NA	7.52E-06	1.23E+01	1.15E+05
Gamma-BHC	2.00E+00	NA	1.06E-05	1.23E+03	6.31E+03
Heptachlor Epoxide	2.00E-01	NA	9.50E-06	NA	1.00E+05
Methoxychlor	4.50E-02	NA	1.58E-05	8.00E+04	1.20E+05
<b>SVOCs/PAHs (Note 1)</b>					
Anthracene	4.50E-02	1.95E-04	1.02E-03	1.40E+04	2.82E+04
Benzo(a)anthracene	5.70E-03	2.20E-08	1.16E-06	1.38E+06	3.98E+05
Benzo(a)pyrene	1.20E-03	5.60E-09	1.55E-06	5.50E+06	1.15E+06
Benzo(b)fluoranthene	1.40E-02	5.00E-07	1.19E-05	5.50E+05	1.15E+06
Benzo(k)fluoranthene	4.30E-03	5.10E-07	3.94E-05	5.50E+05	1.15E+06
Benzo(g,h,i)perylene	7.00E-04	1.03E-10	5.34E-08	1.60E+06	3.24E+06
Bis(2-ethylhexyl)phthalate	2.85E-01	2.00E-07	3.61E-07	5.90E+03	9.50E+03
Carbazole	7.48E+00	NA	1.53E-08	3.04E+06	3.89E+03
Chrysene	1.80E-03	6.30E-09	1.05E-06	2.00E+05	4.07E+05
Dibenzo(a,h)anthracene	5.00E-04	1.00E-10	7.33E-08	3.30E+06	6.31E+06
Fluoranthene	2.06E-01	5.00E-06	6.46E-06	3.80E+04	7.94E+04
Indeno(1,2,3-cd)pyrene	5.30E-04	1.00E-10	6.86E-08	1.60E+06	3.16E+06
Naphthalene	3.17E+01	2.30E-01	1.15E-03	1.30E+03	2.76E+03
Phenanthrene	1.00E+00	6.80E-04	1.59E-04	1.40E+04	2.88E+04
Pyrene	1.32E-01	2.50E-06	5.04E-06	3.80E+04	7.59E+04
<b>VOCs (Note 2)</b>					
1,1,1-Trichloroethane	9.50E+02	1.00E+02	2.76E-02	1.52E+02	3.09E+02
1,1-Dichloroethene	4.00E+02	5.00E+02	1.54E-01	6.50E+01	1.35E+02
1,1-Dichloroethane	5.50E+03	1.82E+02	5.70E-03	3.00E+01	6.17E+01
Benzene	1.76E+03	7.52E+01	5.18E-03	6.50E+01	1.35E+02
Ethylbenzene	1.52E+02	7.08E+00	7.72E-03	1.20E+03	2.19E+03
m,p, o-Xylene	1.75E+02	1.60E+01	7.30E-03	7.00E+02	1.45E+03
Toluene	5.15E+02	2.18E+01	6.30E-03	2.40E+02	4.90E+02
Trichloroethene	1.10E+03	6.90E+01	1.03E-01	1.60E+02	2.63E+02
Vinyl Chloride	1.10E+03	2.30E+03	6.95E-01	8.20E+00	1.70E+01
<b>Petroleum Hydrocarbon Fractions (Note 3)</b>					
<i>Aliphatics</i>					
C8-10	4.30E-01	6.30E-03	1.92E+00	3.16E+04	NA
C10-12	3.40E-02	6.30E-04	2.88E+00	2.51E+06	NA

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C12-16	7.60E-04	4.80E-05	1.25E+01	5.01E+06	NA
C16-21	2.50E+06	1.10E-06	1.18E+02	6.31E+08	NA
<i>Aromatics</i>					
C8-10	6.50E+01	6.30E-03	1.15E-02	1.58E+03	NA
C10-12	2.50E+01	6.30E-04	3.30E-03	2.51E+03	NA
C12-16	5.80E+00	4.80E-05	1.27E-03	5.01E+03	NA
C16-21	6.50E-01	1.10E-06	3.12E-04	1.58E+04	NA
C21-35	6.60E-03	4.40E-10	1.61E-05	1.26E+05	NA

Notes:

NA – Not Available

Sources:

- 1) Basics of Pump -and-Treat Groundwater Remediation Technology, USEPA document 600/8-90/003
- 2) Arthur D. Little, Inc. (1987) The Installation Restoration Program Toxicology Guide, Volume 1, Section 2:1-16.
- 3) Gustafson, J.B., Tell, J.G., and Orem, D, 1997, Selection of Representative TPH Fractions based on Fate and Transport Considerations, Amherst Scientific Publishers, Amherst, MA. 102 pp.