**Section 742.APPENDIX C Tier 2 Illustrations and Tables**

**Section 742.TABLE I Koc Values for Ionizing Organics as a Function of pH (cm3/g or L/kg or cm3water/gsoil)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| pH | Benzoic Acid | 2-Chloro- phenol | 2,4-Dichloro-phenol | Pentachloro-phenol | 2,4,5-Trichloro-phenol | 2,4,6-Trichloro-phenol | Dinoseb | 2,4,5-TP  (Silvex) |
| 4.5 | 1.07E+01 | 3.98E+02 | 1.59E+02 | 1.34E+04 | 2.37E+03 | 1.06E+03 | 3.00E+04 | 1.28E+04 |
| 4.6 | 9.16E+00 | 3.98E+02 | 1.59E+02 | 1.24E+04 | 2.37E+03 | 1.05E+03 | 2.71E+04 | 1.13E+04 |
| 4.7 | 7.79E+00 | 3.98E+02 | 1.59E+02 | 1.13E+04 | 2.37E+03 | 1.05E+03 | 2.41E+04 | 1.01E+04 |
| 4.8 | 6.58E+00 | 3.98E+02 | 1.59E+02 | 1.02E+04 | 2.37E+03 | 1.05E+03 | 2.12E+04 | 9.16E+03 |
| 4.9 | 5.54E+00 | 3.98E+02 | 1.59E+02 | 9.05E+03 | 2.37E+03 | 1.04E+03 | 1.85E+04 | 8.40E+03 |
| 5.0 | 4.62E+00 | 3.98E+02 | 1.59E+02 | 7.96E+03 | 2.36E+03 | 1.03E+03 | 1.59E+04 | 7.76E+03 |
| 5.1 | 3.86E+00 | 3.98E+02 | 1.59E+02 | 6.93E+03 | 2.36E+03 | 1.02E+03 | 1.36E+04 | 7.30E+03 |
| 5.2 | 3.23E+00 | 3.98E+02 | 1.59E+02 | 5.97E+03 | 2.35E+03 | 1.01E+03 | 1.15E+04 | 6.91E+03 |
| 5.3 | 2.70E+00 | 3.98E+02 | 1.59E+02 | 5.10E+03 | 2.34E+03 | 9.99E+02 | 9.66E+03 | 6.60E+03 |
| 5.4 | 2.27E+00 | 3.98E+02 | 1.58E+02 | 4.32E+03 | 2.33E+03 | 9.82E+02 | 8.10E+03 | 6.36E+03 |
| 5.5 | 1.92E+00 | 3.97E+02 | 1.58E+02 | 3.65E+03 | 2.32E+03 | 9.62E+02 | 6.77E+03 | 6.16E+03 |
| 5.6 | 1.63E+00 | 3.97E+02 | 1.58E+02 | 3.07E+03 | 2.31E+03 | 9.38E+02 | 5.65E+03 | 6.00E+03 |
| 5.7 | 1.40E+00 | 3.97E+02 | 1.58E+02 | 2.58E+03 | 2.29E+03 | 9.10E+02 | 4.73E+03 | 5.88E+03 |
| 5.8 | 1.22E+00 | 3.97E+02 | 1.58E+02 | 2.18E+03 | 2.27E+03 | 8.77E+02 | 3.97E+03 | 5.78E+03 |
| 5.9 | 1.07E+00 | 3.97E+02 | 1.57E+02 | 1.84E+03 | 2.24E+03 | 8.39E+02 | 3.35E+03 | 5.70E+03 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| pH | Benzoic Acid | 2-Chloro- phenol | 2,4-Dichloro-phenol | Pentachloro-phenol | 2,4,5-Trichloro-phenol | 2,4,6-Trichloro-phenol | Dinoseb | 2,4,5-TP  (Silvex) |
| 6.0 | 9.50E-01 | 3.96E+02 | 1.57E+02 | 1.56E+03 | 2.21E+03 | 7.96E+02 | 2.84E+03 | 5.64E+03 |
| 6.1 | 8.54E-01 | 3.96E+02 | 1.57E+02 | 1.33E+03 | 2.17E+03 | 7.48E+02 | 2.43E+03 | 5.59E+03 |
| 6.2 | 7.78E-01 | 3.96E+02 | 1.56E+02 | 1.15E+03 | 2.12E+03 | 6.97E+02 | 2.10E+03 | 5.55E+03 |
| 6.3 | 7.19E-01 | 3.95E+02 | 1.55E+02 | 9.98E+02 | 2.06E+03 | 6.44E+02 | 1.83E+03 | 5.52E+03 |
| 6.4 | 6.69E-01 | 3.94E+02 | 1.54E+02 | 8.77E+02 | 1.99E+03 | 5.89E+02 | 1.62E+03 | 5.50E+03 |
| 6.5 | 6.31E-01 | 3.93E+02 | 1.53E+02 | 7.81E+02 | 1.91E+03 | 5.33E+02 | 1.45E+03 | 5.48E+03 |
| 6.6 | 6.00E-01 | 3.92E+02 | 1.52E+02 | 7.03E+02 | 1.82E+03 | 4.80E+02 | 1.32E+03 | 5.46E+03 |
| 6.7 | 5.74E-01 | 3.90E+02 | 1.50E+02 | 6.40E+02 | 1.71E+03 | 4.29E+02 | 1.21E+03 | 5.45E+03 |
| 6.8 | 5.55E-01 | 3.88E+02 | 1.47E+02 | 5.92E+02 | 1.60E+03 | 3.81E+02 | 1.12E+03 | 5.44E+03 |
| 6.9 | 5.39E-01 | 3.86E+02 | 1.45E+02 | 5.52E+02 | 1.47E+03 | 3.38E+02 | 1.05E+03 | 5.43E+03 |
| 7.0 | 5.28E-01 | 3.83E+02 | 1.41E+02 | 5.21E+02 | 1.34E+03 | 3.00E+02 | 9.96E+02 | 5.43E+03 |
| 7.1 | 5.18E-01 | 3.79E+02 | 1.38E+02 | 4.96E+02 | 1.21E+03 | 2.67E+02 | 9.52E+02 | 5.42E+03 |
| 7.2 | 5.10E-01 | 3.75E+02 | 1.33E+02 | 4.76E+02 | 1.07E+03 | 2.39E+02 | 9.18E+02 | 5.42E+03 |
| 7.3 | 5.04E-01 | 3.69E+02 | 1.28E+02 | 4.61E+02 | 9.43E+02 | 2.15E+02 | 8.90E+02 | 5.42E+03 |
| 7.4 | 4.99E-01 | 3.62E+02 | 1.21E+02 | 4.47E+02 | 8.19E+02 | 1.95E+02 | 8.68E+02 | 5.41E+03 |
| 7.5 | 4.95E-01 | 3.54E+02 | 1.14E+02 | 4.37E+02 | 7.03E+02 | 1.78E+02 | 8.50E+02 | 5.41E+03 |
| 7.6 | 4.92E-01 | 3.44E+02 | 1.07E+02 | 4.29E+02 | 5.99E+02 | 1.64E+02 | 8.36E+02 | 5.41E+03 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| pH | Benzoic Acid | 2-Chloro- phenol | 2,4-Dichloro-phenol | Pentachloro-phenol | 2,4,5-Trichloro-phenol | 2,4,6-Trichloro-phenol | Dinoseb | 2,4,5-TP (Silvex) |
| 7.7 | 4.86E-01 | 3.33E+02 | 9.84E+01 | 4.23E+02 | 5.07E+02 | 1.53E+02 | 8.25E+02 | 5.41E+03 |
| 7.8 | 4.86E-01 | 3.19E+02 | 8.97E+01 | 4.18E+02 | 4.26E+02 | 1.44E+02 | 8.17E+02 | 5.41E+03 |
| 7.9 | 4.85-01 | 3.04E+02 | 8.07E+01 | 4.14E+02 | 3.57E+02 | 1.37E+02 | 8.10E+02 | 5.41E+03 |
| 8.0 | 4.85E-01 | 2.86E+02 | 7.17E+01 | 4.10E+02 | 2.98E+02 | 1.31E+02 | 8.04E+02 | 5.41E+03 |
| 8.1 | 4.84E-01 | 2.67E+02 | 6.30E+01 | 4.09E+02 | 2.49E+02 | 1.26E+02 | 8.00E+02 | 5.40E+03 |
| 8.2 | 4.84E-01 | 2.46E+02 | 5.47E+01 | 4.07E+02 | 2.08E+02 | 1.22E+02 | 7.97E+02 | 5.40E+03 |
| 8.3 | 4.83E-01 | 2.24E+02 | 4.40E+01 | 4.05E+02 | 1.75E+02 | 1.19E+02 | 7.93E+02 | 5.40E+03 |
| 8.4 | 4.83E-01 | 2.02E+02 | 4.00E+01 | 4.04E+02 | 1.48E+02 | 1.17E+02 | 7.91E+02 | 5.40E+03 |
| 8.5 | 4.82E-01 | 1.80E+02 | 3.38E+01 | 4.03E+02 | 1.25E+02 | 1.15E+02 | 7.89E+02 | 5.40E+03 |
| 8.6 | 4.82E-01 | 1.58E+02 | 2.84E+01 | 4.02E+02 | 1.08E+02 | 1.13E+02 | 7.88E+02 | 5.40E+03 |
| 8.7 | 4.82E-01 | 1.37E+02 | 2.38E+01 | 4.02E+02 | 9.31E+02 | 1.12E+02 | 7.87E+02 | 5.40E+03 |
| 8.8 | 4.81E-01 | 1.18E+02 | 1.99E+01 | 4.01E+02 | 8.16E+02 | 1.11E+02 | 7.86E+02 | 5.40E+03 |
| 8.9 | 4.81E-01 | 1.00E+02 | 1.66E+01 | 4.01E+02 | 7.23E+01 | 1.10E+02 | 7.85E+02 | 5.40E+03 |
| 9.0 | 4.80E-01 | 8.47E+01 | 1.39E+01 | 4.00E+02 | 6.48E+01 | 1.09E+02 | 7.85E+02 | 5.40E+03 |

(Source: Amended at 31 Ill. Reg. 4063, effective February 23, 2007)