

SL-ADV
Version 3.1; 02/04

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES

X

Reset to
Defaults

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES

ENTER
Chemical
CAS No.
(numbers only,
no dashes)

ENTER
Initial
soil
conc.,
 C_R
($\mu\text{g/kg}$)

Chemical

67663

Chloroform

MORE
↓

| ENTER Average soil temperature, T_s ($^{\circ}\text{C}$) | ENTER Depth below grade to bottom of enclosed space floor, L_f (cm) | ENTER Depth below grade to top of contamination, L_t (cm) | ENTER Depth below grade to bottom of contamination, (enter value of 0 if value is unknown) L_b (cm) | ENTER Thickness of soil stratum A, h_A (cm) | ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm) | ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm) | ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability) | ENTER User-defined stratum A soil vapor permeability, k_v (cm^2) |
|--|---|---|---|---|---|---|---|--|
| 10 | 15 | 30 | 66 | 30 | 0 | 0 | | 1.00E-08 |

MORE
↓

| ENTER Stratum A SCS soil type (Lookup Soil Parameters) | ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3) | ENTER Stratum A soil total porosity, n^A (unitless) | ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3) | ENTER Stratum A soil organic carbon fraction, f_{oc}^A (unitless) | ENTER Stratum B SCS soil type (Lookup Soil Parameters) | ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3) | ENTER Stratum B soil total porosity, n^B (unitless) | ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3) | ENTER Stratum B soil organic carbon fraction, f_{oc}^B (unitless) | ENTER Stratum C SCS soil type (Lookup Soil Parameters) | ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3) | ENTER Stratum C soil total porosity, n^C (unitless) | ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3) | ENTER Stratum C soil organic carbon fraction, f_{oc}^C (unitless) |
|--|---|---|--|---|--|---|---|--|---|--|---|---|--|---|
| | 1.65 | 0.439 | 0.045 | 0.002 | | | | | | | | | | |

MORE
↓

| ENTER Enclosed space floor thickness, L_{crack} (cm) | ENTER Soil-bldg. pressure differential, ΔP ($\text{g/cm} \cdot \text{s}^2$) | ENTER Enclosed space floor length, L_b (cm) | ENTER Enclosed space floor width, W_b (cm) | ENTER Enclosed space height, H_b (cm) | ENTER Floor-wall seam crack width, w (cm) | ENTER Indoor air exchange rate, ER (1/h) | ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{gas} (L/m) |
|---|---|--|---|---|---|--|---|
| 10 | 40 | 1000 | 1000 | 244 | 0.1 | 0.25 | |

| ENTER Averaging time for carcinogens, AT_C (yrs) | ENTER Averaging time for noncarcinogens, AT_{NC} (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) | ENTER Target risk for carcinogens, TR (unitless) | ENTER Target hazard quotient for noncarcinogens, THQ (unitless) |
|--|--|--|---|--|---|
| 70 | 30 | 30 | 350 | 1.0E-05 | 1 |

END

Used to calculate risk-based
soil concentration.

CHEMICAL PROPERTIES SHEET

| Diffusivity in air, D_a (cm ² /s) | Diffusivity in water, D_w (cm ² /s) | Henry's law constant at reference temperature, H (atm-m ³ /mol) | Henry's law constant reference temperature, T_R (°C) | Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol) | Normal boiling point, T_B (°K) | Critical temperature, T_C (°K) | Organic carbon partition coefficient, K_{oc} (cm ³ /g) | Pure component water solubility, S (mg/L) | Unit risk factor, URF (µg/m ³) ⁻¹ | Reference conc., RfC (mg/m ³) | Physical state at soil temperature, (S,L,G) |
|---|---|---|---|---|--|---|--|--|--|--|---|
| 1.04E-01 | 1.00E-05 | 3.66E-03 | 25 | 6,988 | 334.32 | 536.40 | 3.98E+01 | 7.92E+03 | 2.3E-05 | 9.8E-02 | L |

END

INTERMEDIATE CALCULATIONS SHEET

| Exposure duration, τ (sec) | Source-building separation, L_T (cm) | Stratum A soil air-filled porosity, θ_a^A (cm ³ /cm ³) | Stratum B soil air-filled porosity, θ_a^B (cm ³ /cm ³) | Stratum C soil air-filled porosity, θ_a^C (cm ³ /cm ³) | Stratum A effective total fluid saturation, S_{se} (cm ³ /cm ³) | Stratum A soil intrinsic permeability, k_i (cm ²) | Stratum A soil relative air permeability, k_{rg} (cm ²) | Stratum A soil effective vapor permeability, k_v (cm ²) | Floor-wall seam perimeter, X_{crack} (cm) | Initial soil concentration used, C_R (µg/kg) | Bldg. ventilation rate, $Q_{building}$ (cm ³ /s) |
|---------------------------------------|--|--|--|--|--|---|---|---|---|--|---|
| 9.46E+08 | 15 | 0.394 | ERROR | ERROR | #N/A | #N/A | #N/A | 1.00E-08 | 4,000 | 1.00E+00 | 1.69E+04 |

| Area of enclosed space below grade, A_B (cm ²) | Crack-to-total area ratio, η (unitless) | Crack depth below grade, Z_{crack} (cm) | Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol) | Henry's law constant at ave. soil temperature, H_{TS} (atm-m ³ /mol) | Henry's law constant at ave. soil temperature, H'_{TS} (unitless) | Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s) | Stratum A effective diffusion coefficient, D_{eff}^A (cm ² /s) | Stratum B effective diffusion coefficient, D_{eff}^B (cm ² /s) | Stratum C effective diffusion coefficient, D_{eff}^C (cm ² /s) | Total overall effective diffusion coefficient, D_{eff}^T (cm ² /s) | Diffusion path length, L_d (cm) | Convection path length, L_p (cm) |
|--|--|---|--|---|---|---|---|---|---|---|---|--|
| 1.06E+06 | 3.77E-04 | 15 | 7,554 | 1.86E-03 | 8.02E-02 | 1.75E-04 | 2.43E-02 | 0.00E+00 | 0.00E+00 | 2.43E-02 | 15 | 15 |

| Soil-water partition coefficient, K_d (cm ³ /g) | Source vapor conc., C_{source} (µg/m ³) | Crack radius, r_{crack} (cm) | Average vapor flow rate into bldg., Q_{soil} (cm ³ /s) | Crack effective diffusion coefficient, D^{crack} (cm ² /s) | Area of crack, A_{crack} (cm ²) | Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless) | Infinite source indoor attenuation coefficient, α (unitless) | Infinite source bldg. conc., $C_{building}$ (µg/m ³) | Finite source β term (unitless) | Finite source ψ term (sec) ⁻¹ | Time for source depletion, τ_D (sec) | Exposure duration > time for source depletion (YES/NO) |
|--|---|--------------------------------------|---|---|---|--|---|--|--|--|---|---|
| 7.96E-02 | 6.36E+02 | 0.10 | 1.00E+01 | 2.43E-02 | 4.00E+02 | 3.12E+04 | NA | NA | 1.72E+02 | 4.16E-05 | 9.98E+06 | YES |

| Finite source indoor attenuation coefficient, < α > (unitless) | Mass limit bldg. conc., $C_{building}$ (µg/m ³) | Finite source bldg. conc., $C_{building}$ (µg/m ³) | Final finite source bldg. conc., $C_{building}$ (µg/m ³) | Unit risk factor, URF (µg/m ³) ⁻¹ | Reference conc., RfC (mg/m ³) |
|---|---|--|--|--|---|
| NA | 3.93E-03 | NA | 3.93E-03 | 2.3E-05 | 9.8E-02 |

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

| Indoor exposure soil conc., carcinogen (µg/kg) | Indoor exposure soil conc., noncarcinogen (µg/kg) | Risk-based indoor exposure soil conc., (µg/kg) | Soil saturation conc., C _{sat} (µg/kg) | Final indoor exposure soil conc., (µg/kg) |
|--|---|--|---|---|
| 2.69E+02 | 2.60E+04 | 2.69E+02 | 9.98E+05 | 2.69E+02 |

INCREMENTAL RISK CALCULATIONS:

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|--|--|
| NA | NA |

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

MESSAGE: The values of C_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

SCROLL
DOWN
TO "END"

END

VLOOKUP TABLES

| Soil Properties Lookup Table | | | | | | | | Bulk Density | | |
|------------------------------|-----------------------|-----------------------|--------------|--------------|---------------------------------------|--|--------------------------|----------------------|--|-----------------|
| SCS Soil Type | K _s (cm/h) | α ₁ (1/cm) | N (unitless) | M (unitless) | n (cm ³ /cm ³) | θ _i (cm ³ /cm ³) | Mean Grain Diameter (cm) | (g/cm ³) | θ _s (cm ³ /cm ³) | SCS Soil Name |
| C | 0.61 | 0.01496 | 1.253 | 0.2019 | 0.459 | 0.098 | 0.0092 | 1.43 | 0.215 | Clay |
| CL | 0.34 | 0.01581 | 1.416 | 0.2938 | 0.442 | 0.079 | 0.016 | 1.48 | 0.168 | Clay Loam |
| L | 0.50 | 0.01112 | 1.472 | 0.3207 | 0.399 | 0.061 | 0.020 | 1.59 | 0.148 | Loam |
| LS | 4.38 | 0.03475 | 1.746 | 0.4273 | 0.390 | 0.049 | 0.040 | 1.62 | 0.076 | Loamy Sand |
| S | 26.78 | 0.03524 | 3.177 | 0.6852 | 0.375 | 0.053 | 0.044 | 1.66 | 0.054 | Sand |
| SC | 0.47 | 0.03342 | 1.208 | 0.1722 | 0.385 | 0.117 | 0.025 | 1.63 | 0.197 | Sandy Clay |
| SCL | 0.55 | 0.02109 | 1.330 | 0.2481 | 0.384 | 0.063 | 0.029 | 1.63 | 0.146 | Sandy Clay Loam |
| SI | 1.82 | 0.00658 | 1.679 | 0.4044 | 0.489 | 0.050 | 0.0046 | 1.35 | 0.167 | Silt |
| SIC | 0.40 | 0.01622 | 1.321 | 0.2430 | 0.481 | 0.111 | 0.0039 | 1.38 | 0.216 | Silty Clay |
| SICL | 0.46 | 0.00839 | 1.521 | 0.3425 | 0.482 | 0.090 | 0.0056 | 1.37 | 0.198 | Silty Clay Loam |
| SIL | 0.76 | 0.00506 | 1.663 | 0.3987 | 0.439 | 0.065 | 0.011 | 1.49 | 0.180 | Silt Loam |
| SL | 1.60 | 0.02667 | 1.449 | 0.3099 | 0.387 | 0.039 | 0.030 | 1.62 | 0.103 | Sandy Loam |

| Chemical Properties Lookup Table | | | | | | | | | | | | | | | | |
|----------------------------------|---------------------------------------|--|---|---|---|------------------------------------|--|---|---|---|---|--|---|---|----------------------|----------------------|
| CAS No. | Chemical | Organic carbon partition coefficient, K _{oc} (cm ³ /g) | Diffusivity in air, D _a (cm ² /s) | Diffusivity in water, D _w (cm ² /s) | Pure component water solubility, S (mg/L) | Henry's law constant H' (unitless) | Henry's law constant at reference temperature, H (atm·m ³ /mol) | Henry's law constant reference temperature, T _R (°C) | Normal boiling point, T _b (°K) | Critical temperature, T _C (°K) | Enthalpy of vaporization at the normal boiling point, ΔH _{v,b} (cal/mol) | Unit risk factor, URF (μg/m ³) ⁻¹ | Reference conc., RfC (mg/m ³) | Physical state at soil temperature, (S,L,G) | URF extrapolated (X) | RfC extrapolated (X) |
| 56235 | Carbon tetrachloride | 1.74E+02 | 7.80E-02 | 8.80E-06 | 7.93E+02 | 1.24E+00 | 3.03E-02 | 25 | 349.90 | 556.60 | 7,127 | 6.0E-06 | 1.0E-01 | L | | |
| 57749 | Chlordane | 1.20E+05 | 1.18E-02 | 4.37E-06 | 5.60E-02 | 1.99E-03 | 4.85E-05 | 25 | 624.24 | 885.73 | 14,000 | 1.0E-04 | 7.0E-04 | S | | |
| 58899 | gamma-HCH (Lindane) | 1.07E+03 | 1.42E-02 | 7.34E-06 | 7.30E+00 | 5.73E-04 | 1.40E-05 | 25 | 596.55 | 839.36 | 15,000 | 3.7E-04 | 1.1E-03 | S | X | X |
| 60297 | Ethyl ether | 5.73E+00 | 7.82E-02 | 8.61E-06 | 5.68E+04 | 1.35E+00 | 3.29E-02 | 25 | 307.50 | 466.74 | 6,338 | 0.0E+00 | 7.0E-01 | L | | X |
| 60571 | Dieldrin | 2.14E+04 | 1.25E-02 | 4.74E-06 | 1.95E-01 | 6.18E-04 | 1.51E-05 | 25 | 613.32 | 842.25 | 17,000 | 4.6E-03 | 1.8E-04 | S | | X |
| 67641 | Acetone | 5.75E-01 | 1.24E-01 | 1.14E-05 | 1.00E+06 | 1.59E-03 | 3.87E-05 | 25 | 329.20 | 508.10 | 6,955 | 0.0E+00 | 3.1E+01 | L | | X |
| 67663 | Chloroform | 3.98E+01 | 1.04E-01 | 1.00E-05 | 7.92E+03 | 1.50E-01 | 3.66E-03 | 25 | 334.32 | 536.40 | 6,988 | 2.3E-05 | 9.8E-02 | L | | |
| 67721 | Hexachloroethane | 1.78E+03 | 2.50E-03 | 6.80E-06 | 5.00E+01 | 1.59E-01 | 3.88E-03 | 25 | 458.00 | 695.00 | 9,510 | 1.1E-05 | 3.0E-02 | S | | X |
| 71432 | Benzene | 5.89E+01 | 8.80E-02 | 9.80E-06 | 1.79E+03 | 2.27E-01 | 5.54E-03 | 25 | 353.24 | 562.16 | 7,342 | 7.8E-06 | 3.0E-02 | L | | |
| 71556 | 1,1,1-Trichloroethane | 1.10E+02 | 7.80E-02 | 8.80E-06 | 1.33E+03 | 7.03E-01 | 1.72E-02 | 25 | 347.24 | 545.00 | 7,136 | 0.0E+00 | 5.0E+00 | L | | |
| 72435 | Methoxychlor | 9.77E+04 | 1.56E-02 | 4.46E-06 | 1.00E-01 | 6.46E-04 | 1.58E-05 | 25 | 651.02 | 848.49 | 16,000 | 0.0E+00 | 1.8E-02 | S | | X |
| 72559 | DDE | 4.47E+06 | 1.44E-02 | 5.87E-06 | 1.20E-01 | 8.59E-04 | 2.09E-05 | 25 | 636.44 | 860.38 | 15,000 | 9.7E-05 | 0.0E+00 | S | X | |
| 74839 | Methyl bromide | 1.05E+01 | 7.28E-02 | 1.21E-05 | 1.52E+04 | 2.55E-01 | 6.22E-03 | 25 | 276.71 | 467.00 | 5,714 | 0.0E+00 | 5.0E-03 | G | | |
| 74873 | Methyl chloride (chloromethane) | 2.12E+00 | 1.26E-01 | 6.50E-06 | 5.33E+03 | 3.61E-01 | 8.80E-03 | 25 | 249.00 | 416.25 | 5,115 | 1.8E-06 | 9.0E-02 | L | | |
| 74908 | Hydrogen cyanide | 3.80E+00 | 1.93E-01 | 2.10E-05 | 1.00E+06 | 5.44E-03 | 1.33E-04 | 25 | 299.00 | 456.70 | 6,676 | 0.0E+00 | 3.0E-03 | L | | |
| 74953 | Methylene bromide | 1.26E+01 | 4.30E-02 | 8.44E-06 | 1.19E+04 | 3.52E-02 | 8.59E-04 | 25 | 370.00 | 583.00 | 7,868 | 0.0E+00 | 4.0E-04 | L | | X |
| 75003 | Chloroethane (ethyl chloride) | 4.40E+00 | 2.71E-01 | 1.15E-05 | 5.68E+03 | 3.61E-01 | 8.80E-03 | 25 | 285.30 | 460.40 | 5,879 | 0.0E+00 | 1.0E+01 | L | X | |
| 75014 | Vinyl chloride (chloroethene) | 1.86E+01 | 1.06E-01 | 1.23E-05 | 8.80E+03 | 1.10E+00 | 2.69E-02 | 25 | 259.25 | 432.00 | 5,250 | 4.4E-06 | 1.0E-01 | G | | |
| 75058 | Acetonitrile | 4.20E+00 | 1.28E-01 | 1.66E-05 | 1.00E+06 | 1.42E-03 | 3.45E-05 | 25 | 354.60 | 545.50 | 7,110 | 0.0E+00 | 6.0E-02 | L | | |
| 75070 | Acetaldehyde | 1.06E+00 | 1.24E-01 | 1.41E-05 | 1.00E+06 | 3.23E-03 | 7.87E-05 | 25 | 293.10 | 466.00 | 6,157 | 2.2E-06 | 9.0E-03 | L | | |
| 75092 | Methylene chloride | 1.17E+01 | 1.01E-01 | 1.17E-05 | 1.30E+04 | 8.96E-02 | 2.18E-03 | 25 | 313.00 | 510.00 | 6,706 | 1.0E-08 | 6.0E-01 | L | | |
| 75150 | Carbon disulfide | 4.57E+01 | 1.04E-01 | 1.00E-05 | 1.19E+03 | 1.24E+00 | 3.02E-02 | 25 | 319.00 | 552.00 | 6,391 | 0.0E+00 | 7.0E-01 | L | | |
| 75218 | Ethylene oxide | 1.33E+00 | 1.04E-01 | 1.45E-05 | 3.04E+05 | 2.27E-02 | 5.54E-04 | 25 | 283.60 | 469.00 | 6,104 | 1.0E-04 | 0.0E+00 | L | | |
| 75252 | Bromoform | 8.71E+01 | 1.49E-02 | 1.03E-05 | 3.10E+03 | 2.41E-02 | 5.88E-04 | 25 | 422.35 | 696.00 | 9,479 | 1.1E-06 | 0.0E+00 | L | | X |
| 75274 | Bromodichloromethane | 5.50E+01 | 2.98E-02 | 1.06E-05 | 6.74E+03 | 6.54E-02 | 1.60E-03 | 25 | 363.15 | 585.85 | 7,800 | 3.7E-05 | 0.0E+00 | L | X | X |
| 75296 | 2-Chloropropane | 9.14E+00 | 8.88E-02 | 1.01E-05 | 3.73E+03 | 5.93E-01 | 1.45E-02 | 25 | 308.70 | 485.00 | 6,286 | 0.0E+00 | 1.0E-01 | L | | |
| 75343 | 1,1-Dichloroethane | 3.16E+01 | 7.42E-02 | 1.05E-05 | 5.06E+03 | 2.30E-01 | 5.61E-03 | 25 | 330.55 | 523.00 | 6,895 | 1.6E-06 | 0.0E+00 | L | | |
| 75354 | 1,1-Dichloroethylene | 5.89E+01 | 9.00E-02 | 1.04E-05 | 2.25E+03 | 1.07E+00 | 2.60E-02 | 25 | 304.75 | 576.05 | 6,247 | 0.0E+00 | 2.0E-01 | L | | |
| 75456 | Chlorodifluoromethane | 4.79E+01 | 1.01E-01 | 1.28E-05 | 2.00E+00 | 1.10E+00 | 2.70E-02 | 25 | 232.40 | 369.30 | 4,836 | 0.0E+00 | 5.0E+01 | L | | |
| 75694 | Trichlorofluoromethane | 4.97E+02 | 8.70E-02 | 9.70E-06 | 1.10E+03 | 3.97E+00 | 9.68E-02 | 25 | 296.70 | 471.00 | 5,999 | 0.0E+00 | 7.0E-01 | L | | |
| 75718 | Dichlorodifluoromethane | 4.57E+02 | 6.65E-02 | 9.92E-06 | 2.80E+02 | 1.40E+01 | 3.42E-01 | 25 | 243.20 | 384.95 | 9,421 | 0.0E+00 | 1.0E-01 | L | | |
| 76131 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.11E+04 | 7.80E-02 | 8.20E-06 | 1.70E+02 | 1.97E+01 | 4.80E-01 | 25 | 320.70 | 487.30 | 6,463 | 0.0E+00 | 3.0E+01 | L | | |
| 76448 | Heptachlor | 1.41E+06 | 1.12E-02 | 5.69E-06 | 1.80E-01 | 6.05E+01 | 1.48E+00 | 25 | 603.69 | 846.31 | 13,000 | 1.3E-03 | 1.8E-03 | S | | X |
| 77474 | Hexachlorocyclopentadiene | 2.00E+05 | 1.61E-02 | 7.21E-06 | 1.80E+00 | 1.10E+00 | 2.69E-02 | 25 | 512.15 | 746.00 | 10,931 | 0.0E+00 | 2.0E-04 | L | | |
| 78831 | Isobutanol | 2.59E+00 | 8.60E-02 | 9.30E-06 | 8.50E+04 | 4.83E-04 | 1.18E-05 | 25 | 381.04 | 547.78 | 10,936 | 0.0E+00 | 1.1E+00 | L | | X |
| 78875 | 1,2-Dichloropropane | 4.37E+01 | 7.82E-02 | 8.73E-06 | 2.80E+03 | 1.15E-01 | 2.79E-03 | 25 | 369.52 | 572.00 | 7,590 | 1.0E-05 | 4.0E-03 | L | X | |
| 78933 | Methylethylketone (2-butanone) | 2.30E+00 | 8.08E-02 | 9.80E-06 | 2.23E+05 | 2.29E-03 | 5.58E-05 | 25 | 352.50 | 536.78 | 7,481 | 0.0E+00 | 5.0E+00 | L | | |
| 79005 | 1,1,2-Trichloroethane | 5.01E+01 | 7.80E-02 | 8.80E-06 | 4.42E+03 | 3.73E-02 | 9.11E-04 | 25 | 386.15 | 602.00 | 8,322 | 1.6E-05 | 2.0E-04 | L | | X |
| 79016 | Trichloroethylene | 1.66E+02 | 7.90E-02 | 9.10E-06 | 1.47E+03 | 4.21E-01 | 1.03E-02 | 25 | 360.36 | 544.20 | 7,505 | 4.1E-06 | 3.0E-03 | L | X | |
| 79209 | Methyl acetate | 3.26E+00 | 1.04E-01 | 1.00E-05 | 2.00E+03 | 4.84E-03 | 1.18E-04 | 25 | 329.80 | 506.70 | 7,260 | 0.0E+00 | 3.5E+00 | L | | X |
| 79345 | 1,1,2,2-Tetrachloroethane | 9.33E+01 | 7.10E-02 | 7.90E-06 | 2.96E+03 | 1.41E-02 | 3.44E-04 | 25 | 419.60 | 661.15 | 8,996 | 5.8E-05 | 0.0E+00 | L | | X |
| 79469 | 2-Nitropropane | 1.17E+01 | 9.23E-02 | 1.01E-05 | 1.70E+04 | 5.03E-03 | 1.23E-04 | 25 | 393.20 | 594.00 | 8,383 | 2.7E-03 | 2.0E-02 | L | | |
| 80626 | Methylmethacrylate | 6.98E+00 | 7.70E-02 | 8.60E-06 | 1.50E+04 | 1.38E-02 | 3.36E-04 | 25 | 373.50 | 567.00 | 8,975 | 0.0E+00 | 7.0E-01 | L | | |
| 83329 | Acenaphthene | 7.08E+03 | 4.21E-02 | 7.69E-06 | 3.57E+00 | 6.34E-03 | 1.55E-04 | 25 | 550.54 | 803.15 | 12,155 | 0.0E+00 | 0.0E+00 | S | | X |
| 86737 | Fluorene | 1.38E+04 | 3.63E-02 | 7.88E-06 | 1.98E+00 | 2.60E-03 | 6.34E-05 | 25 | 570.44 | 870.00 | 12,666 | 0.0E+00 | 0.0E+00 | S | | X |
| 87683 | Hexachloro-1,3-butadiene | 5.37E+04 | 5.61E-02 | 6.16E-06 | 3.20E+00 | 3.33E-01 | 8.13E-03 | 25 | 486.15 | 738.00 | 10,206 | 2.2E-05 | 0.0E+00 | L | | X |
| 88722 | o-Nitrotoluene | 3.24E+02 | 5.87E-02 | 8.67E-06 | 6.50E+02 | 5.11E-04 | 1.25E-05 | 25 | 495.00 | 720.00 | 12,239 | 0.0E+00 | 0.0E+00 | L | | X |
| 91203 | Naphthalene | 2.00E+03 | 5.90E-02 | 7.50E-06 | 3.10E+01 | 1.98E-02 | 4.82E-04 | 25 | 491.14 | 748.40 | 10,373 | 3.4E-05 | 3.0E-03 | S | | |
| 91576 | 2-Methylnaphthalene | 2.81E+03 | 5.22E-02 | 7.75E-06 | 2.46E+01 | 2.12E-02 | 5.17E-04 | 25 | 514.26 | 761.00 | 12,600 | 0.0E+00 | 3.0E-03 | S | | X |
| 92524 | Biphenyl | 4.38E+03 | 4.04E-02 | 8.15E-06 | 7.45E+00 | 1.23E-02 | 2.99E-04 | 25 | 529.10 | 789.00 | 10,890 | 0.0E+00 | 1.8E-01 | S | | X |
| 95476 | o-Xylene | 3.63E+02 | 8.70E-02 | 1.00E-05 | 1.78E+02 | 2.12E-01 | 5.18E-03 | 25 | 417.60 | 630.30 | 8,661 | 0.0E+00 | 1.0E-01 | L | | |
| 95501 | 1,2-Dichlorobenzene | 6.17E+02 | 6.90E-02 | 7.90E-06 | 1.56E+02 | 7.77E-02 | 1.90E-03 | 25 | 453.57 | 705.00 | 9,700 | 0.0E+00 | 2.0E-01 | L | | |
| 95578 | 2-Chlorophenol | 3.88E+02 | 5.01E-02 | 9.46E-06 | 2.20E+04 | 1.60E-02 | 1.18E+05 | 25 | 447.53 | 675.00 | 9,572 | 0.0E+00 | 2.0E-01 | L | | X |
| 95636 | 1,2,4-Trimethylbenzene | 1.35E+03 | 6.06E-02 | 7.92E-06 | 5.70E+01 | 2.52E-01 | 6.14E-03 | 25 | 442.30 | 649.17 | 9,369 | 0.0E+00 | 7.0E-03 | L | | |
| 96184 | 1,2,3-Trichloropropane | 2.20E+01 | 7.10E-02 | 7.90E-06 | 1.75E+03 | 1.67E-02 | 4.08E-04 | 25 | 430.00 | 652.00 | 9,171 | 0.0E+00 | 3.0E-04 | L | X | |

Surrogate toxicity values (red numbers) used with the surrogate chemical presented below.

VLOOKUP TABLES

| | | | | | | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----|--------|---------|------------|---------|----------------|-----|---|----------------------------|
| 96333 Methyl acrylate | 4.53E+00 | 9.76E-02 | 1.02E-05 | 6.00E+04 | 7.68E-03 | 1.87E-04 | 25 | 353.70 | 536.00 | 7,749 | 0.0E+00 | 1.1E-01 | L | | X |
| 97632 Ethylmethacrylate | 2.95E+01 | 6.53E-02 | 8.37E-06 | 3.67E+03 | 3.44E-02 | 8.40E-04 | 25 | 390.00 | 571.00 | 10,957 | 0.0E+00 | 3.2E-01 | L | | X |
| 98066 tert-Butylbenzene | 7.71E+02 | 5.65E-02 | 8.02E-06 | 2.95E+01 | 4.87E-01 | 1.19E-02 | 25 | 442.10 | 1220.00 | 8,980 | 0.0E+00 | 3.0E-02 | L | X | Benzene |
| 98828 Cumene | 4.89E+02 | 6.50E-02 | 7.10E-06 | 6.13E+01 | 4.74E+01 | 1.46E-02 | 25 | 425.56 | 631.10 | 10,335 | 0.0E+00 | 4.0E-01 | L | | |
| 98862 Acetophenone | 5.77E+01 | 6.00E-02 | 8.73E-06 | 6.13E+03 | 4.38E-04 | 1.07E-05 | 25 | 475.00 | 709.50 | 11,732 | 0.0E+00 | 3.5E-01 | S,L | X | |
| 98953 Nitrobenzene | 6.46E+01 | 7.60E-02 | 8.60E-06 | 2.09E+00 | 9.82E-04 | 2.39E-05 | 25 | 483.95 | 719.00 | 10,566 | 4.0E-05 | 9.0E-03 | L | | |
| 100414 Ethylbenzene | 3.63E+02 | 7.50E-02 | 7.80E-06 | 1.69E+02 | 3.22E-01 | 7.86E-03 | 25 | 409.34 | 617.20 | 8,501 | 2.5E-06 | 1.0E+00 | L | | |
| 100425 Styrene | 7.76E+02 | 7.10E-02 | 8.00E-06 | 3.10E+02 | 1.12E-01 | 2.74E-03 | 25 | 418.31 | 636.00 | 8,737 | 0.0E+00 | 1.0E+00 | L | | |
| 100447 Benzylchloride | 6.14E+01 | 7.50E-02 | 7.80E-06 | 5.25E+02 | 1.70E-02 | 4.14E-04 | 25 | 452.00 | 685.00 | 8,773 | 4.9E-05 | 0.0E+00 | L | X | |
| 100527 Benzaldehyde | 4.59E+01 | 7.21E-02 | 9.07E-06 | 3.30E+03 | 9.73E-04 | 2.37E-05 | 25 | 452.00 | 695.00 | 11,658 | 0.0E+00 | 3.5E-01 | L | X | Benzene |
| 103651 n-Propylbenzene | 5.62E+02 | 6.01E-02 | 7.83E-06 | 6.00E+01 | 4.37E-01 | 1.07E-02 | 25 | 432.20 | 630.00 | 9,123 | 0.0E+00 | 1.0E+00 | L | X | |
| 104518 n-Butylbenzene | 1.11E+03 | 5.70E-02 | 8.12E-06 | 2.00E+00 | 5.38E-01 | 1.31E-02 | 25 | 456.46 | 660.50 | 9,290 | 0.0E+00 | 3.0E-02 | L | X | |
| 106423 p-Xylene | 3.89E+02 | 7.69E-02 | 8.44E-06 | 1.85E+02 | 3.13E-01 | 7.64E-03 | 25 | 411.52 | 616.20 | 8,525 | 0.0E+00 | 1.0E-01 | L | | |
| 106467 1,4-Dichlorobenzene | 6.17E+02 | 6.90E-02 | 7.90E-06 | 7.90E+01 | 9.82E-02 | 2.39E-03 | 25 | 447.21 | 684.75 | 9,271 | 1.1E-05 | 8.0E-01 | S | | |
| 106934 1,2-Dibromoethane (ethylene dibr) | 2.50E+01 | 2.17E-02 | 1.19E-05 | 4.18E+03 | 3.04E-02 | 7.41E-04 | 25 | 404.60 | 583.00 | 8,310 | 6.0E-04 | 9.0E-03 | L | | |
| 106990 1,3-Butadiene | 1.91E+01 | 2.49E-01 | 1.08E-05 | 7.35E+02 | 3.01E+00 | 7.34E-02 | 25 | 268.60 | 425.00 | 5,370 | 3.0E-02 | 2.0E-03 | L | | |
| 107028 Acrolein | 2.76E+00 | 1.05E-01 | 1.22E-05 | 2.13E+05 | 4.99E-03 | 1.22E-04 | 25 | 325.60 | 506.00 | 6,731 | 0.0E+00 | 2.0E-05 | L | | |
| 107062 1,2-Dichloroethane | 1.74E+01 | 1.04E-01 | 9.90E-06 | 8.52E+03 | 4.00E-02 | 9.77E-04 | 25 | 356.65 | 561.00 | 7,643 | 2.6E-05 | 7.0E-03 | L | | |
| 107131 Acrylonitrile | 5.90E+00 | 1.22E-01 | 1.34E-05 | 7.40E+04 | 4.21E-03 | 1.03E-04 | 25 | 350.30 | 519.00 | 7,786 | 6.8E-05 | 2.0E-03 | L | | |
| 108054 Vinyl acetate | 5.25E+00 | 8.50E-02 | 9.20E-06 | 2.00E+04 | 2.09E-02 | 5.10E-04 | 25 | 345.65 | 519.13 | 7,800 | 0.0E+00 | 2.0E-01 | L | | |
| 108101 Methylisobutylketone (4-methyl-2 | 9.06E+00 | 7.50E-02 | 7.80E-06 | 1.90E+04 | 5.64E-03 | 1.38E-04 | 25 | 389.50 | 571.00 | 8,243 | 0.0E+00 | 3.0E+00 | L | | |
| 108383 m-Xylene | 4.07E+02 | 7.00E-02 | 7.80E-06 | 1.61E+02 | 3.00E-01 | 7.32E-03 | 25 | 412.27 | 617.05 | 8,523 | 0.0E+00 | 1.0E-01 | L | | |
| 108678 1,3,5-Trimethylbenzene | 1.35E+03 | 6.02E-02 | 8.67E-06 | 2.00E+00 | 2.41E-01 | 5.87E-03 | 25 | 437.89 | 637.25 | 9,321 | 0.0E+00 | 7.0E-03 | L | | 1,2,4-Trimethylbenzene |
| 108872 Methylcyclohexane | 7.85E+01 | 7.35E-02 | 8.52E-06 | 1.40E+01 | 4.22E+00 | 1.03E-01 | 25 | 373.90 | 572.20 | 7,474 | 0.0E+00 | 3.0E+00 | L | | |
| 108883 Toluene | 1.82E+02 | 8.70E-02 | 8.60E-06 | 5.26E+02 | 2.72E-01 | 6.62E-03 | 25 | 383.78 | 591.79 | 7,930 | 0.0E+00 | 5.0E+00 | L | | |
| 108907 Chlorobenzene | 2.19E+02 | 7.30E-02 | 8.70E-06 | 4.72E+02 | 1.51E-01 | 3.69E-03 | 25 | 404.87 | 632.40 | 8,410 | 0.0E+00 | 5.0E-02 | L | | |
| 109693 1-Chlorobutane | 1.72E+01 | 8.26E-02 | 1.00E-05 | 1.10E+03 | 6.93E-01 | 1.69E-02 | 25 | 351.60 | 542.00 | 7,263 | 0.0E+00 | 1.4E+00 | L | X | |
| 110009 Furan | 1.86E+01 | 1.04E-01 | 1.22E-05 | 1.00E+04 | 2.21E-01 | 5.39E-03 | 25 | 304.60 | 490.20 | 6,477 | 0.0E+00 | 3.5E-03 | L | X | |
| 110543 Hexane | 4.34E+01 | 2.00E-01 | 7.77E-06 | 1.24E+01 | 6.82E+01 | 1.66E+00 | 25 | 341.70 | 508.00 | 6,895 | 0.0E+00 | 2.0E-01 | L | | |
| 111444 Bis(2-chloroethyl)ether | 1.55E+01 | 6.92E-02 | 7.53E-06 | 1.72E+04 | 7.36E-04 | 1.80E-05 | 25 | 451.15 | 659.79 | 10,803 | 3.3E-04 | 0.0E+00 | L | | |
| 115297 Endosulfan | 2.14E+03 | 1.15E-02 | 4.55E-06 | 5.10E-01 | 4.58E-04 | 1.12E-05 | 25 | 674.43 | 942.94 | 14,000 | 0.0E+00 | 2.1E-02 | S | X | |
| 118741 Hexachlorobenzene | 5.50E+04 | 5.42E-02 | 5.91E-06 | 5.00E-03 | 5.40E-02 | 1.32E-03 | 25 | 582.55 | 825.00 | 14,447 | 4.6E-04 | 0.0E+00 | S | X | |
| 120821 1,2,4-Trichlorobenzene | 1.78E+03 | 3.00E-02 | 8.23E-06 | 4.88E+01 | 5.81E-02 | 1.42E-03 | 25 | 486.15 | 725.00 | 10,471 | 0.0E+00 | 2.0E-03 | L | | |
| 123739 Crotonaldehyde (2-butenal) | 4.82E+00 | 9.56E-02 | 1.07E-05 | 3.69E+04 | 7.99E-04 | 1.95E-05 | 25 | 375.20 | 568.00 | 9 | 5.4E-04 | 0.0E+00 | L | X | |
| 124481 Chlorodibromomethane | 6.31E+01 | 1.96E-02 | 1.05E-05 | 2.60E+03 | 3.20E-02 | 7.81E-04 | 25 | 416.14 | 678.20 | 5,900 | 2.7E-05 | 0.0E+00 | L | X | X |
| 126987 Methacrylonitrile | 3.58E+01 | 1.12E-01 | 1.32E-05 | 2.54E+04 | 1.01E-02 | 2.46E-04 | 25 | 363.30 | 554.00 | 7,600 | 0.0E+00 | 7.0E-04 | L | | |
| 126998 2-Chloro-1,3-butadiene (chloropr | 6.73E+01 | 8.58E-02 | 1.03E-05 | 2.12E+03 | 4.91E-01 | 1.20E-02 | 25 | 332.40 | 525.00 | 8,075 | 0.0E+00 | 7.0E-03 | L | | |
| 127184 Tetrachloroethylene | 1.55E+02 | 7.20E-02 | 8.20E-06 | 2.00E+02 | 7.53E-01 | 1.84E-02 | 25 | 394.40 | 620.20 | 8,288 | 2.6E-07 | 6.0E-04 | L | | |
| 129000 Pyrene | 1.05E+05 | 2.72E-02 | 7.24E-06 | 1.35E+00 | 4.50E-04 | 1.10E-05 | 25 | 667.95 | 936 | 14,370 | 0.0E+00 | 0.0E+00 | S | X | |
| 132649 Dibenzofuran | 5.15E+03 | 2.38E-02 | 6.00E-06 | 3.10E+00 | 5.15E-04 | 1.26E-05 | 25 | 560 | 824 | 66,400 | 0.0E+00 | 0.0E+00 | S | X | |
| 135988 sec-Butylbenzene | 9.66E+02 | 5.70E-02 | 8.12E-06 | 3.94E+00 | 5.68E-01 | 1.39E-02 | 25 | 446.5 | 679 | 88,730 | 0.0E+00 | 3.0E-02 | L | X | Benzene |
| 141796 Ethylacetate | 6.44E+00 | 7.32E-02 | 9.70E-06 | 8.03E+04 | 5.64E-03 | 1.38E-04 | 25 | 350.26 | 523.3 | 76,336 | 0.0E+00 | 3.2E+00 | L | X | |
| 156592 cis-1,2-Dichloroethylene | 3.55E+01 | 7.36E-02 | 1.13E-05 | 3.50E+03 | 1.67E-01 | 4.07E-03 | 25 | 333.65 | 544 | 7,192 | 0.0E+00 | 6.0E-02 | L | X | trans-1,2-Dichloroethylene |
| 156605 trans-1,2-Dichloroethylene | 5.25E+01 | 7.07E-02 | 1.19E-05 | 6.30E+03 | 3.84E-01 | 9.36E-03 | 25 | 320.85 | 516.5 | 6,717 | 0.0E+00 | 6.0E-02 | L | X | |
| 541731 1,3-Dichlorobenzene | 1.98E+03 | 6.92E-02 | 7.86E-06 | 1.34E+02 | 1.27E-01 | 3.09E-03 | 25 | 446 | 684 | 92,301.8 | 0.0E+00 | 2.0E-01 | L | X | 1,2-Dichlorobenzene |
| 309002 Aldrin | 2.45E+06 | 1.32E-02 | 4.86E-06 | 1.70E-02 | 6.95E-03 | 1.70E-04 | 25 | 603.01 | 839.37 | 15,000 | 4.9E-03 | 1.1E-04 | S | X | |
| 319846 alpha-HCH (alpha-BHC) | 1.23E+03 | 1.42E-02 | 7.34E-06 | 2.00E+00 | 4.34E-04 | 1.06E-05 | 25 | 596.55 | 839.36 | 15,000 | 1.8E-03 | 0.0E+00 | S | | |
| 542756 1,3-Dichloropropene | 4.57E+01 | 6.26E-02 | 1.00E-05 | 2.80E+03 | 7.24E-01 | 1.77E-02 | 25 | 381.15 | 587.38 | 7,900 | 4.0E-06 | 2.0E-02 | L | | |
| 630206 1,1,1,2-Tetrachloroethane | 1.16E+02 | 7.10E-02 | 7.90E-06 | 1.10E+03 | 9.90E-02 | 2.41E-03 | 25 | 403.5 | 624 | 97,682,825 | 7.4E-06 | 0.0E+00 | L | X | |
| 1634044 MTBE | 7.26E+00 | 1.02E-01 | 1.05E-05 | 5.10E+04 | 2.56E-02 | 6.23E-04 | 25 | 328.3 | 497.1 | 6,677.66 | 0.0E+00 | 3.0E+00 | L | | |
| 7439976 Mercury (elemental) | 5.20E+01 | 3.07E-02 | 6.30E-06 | 2.00E+01 | 4.40E-01 | 1.07E-02 | 25 | 629.88 | 1750 | 14,127 | 0.0E+00 | 3.0E-04 | L | | |
| 591786 2-Hexanone | 1.50E+01 | 7.00E-02 | 8.40E-06 | 1.70E+04 | 3.80E-03 | 9.30E-05 | 25 | 400.8 | 587 | 8,554 | 0.0E+00 | 3.0E-02 | L | | |

Highlighted chemicals do not have inhalation toxicity values or a surrogate.

VLOOKUP TABLES