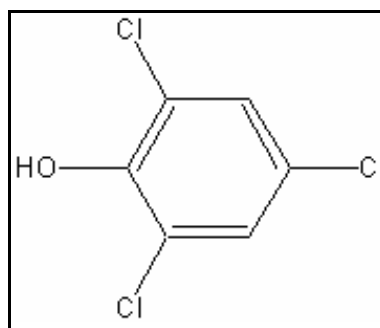




TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES

2,4,6-TRICHLOROPHENOL

CAS RN: 88-06-2
Water Solubility: 0.08 g/100 mL
Log K_{ow}: 3.37^P



Standard

The procedures described in the Tier II methodology indicate that, except possibly where a locally important species is very sensitive, aquatic organisms should not be affected unacceptably if the four (4) day average concentration of 2,4,6-trichlorophenol does not exceed 1.4 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 12 µg/L more than once every three (3) years on the average.

Calculations

Acute Aquatic Life:

$$\text{SAV} = \text{lowest GMAV/SAF}$$

$$\text{Lowest GMAV} = 320 \text{ } \mu\text{g/L}$$

$$\text{SAF} = 13.0$$

$$\text{SAV} = 450/13.0 = 24.62 \text{ } \mu\text{g/L}$$

$$\text{SMC} = \text{SAV}/2 = 24.62/2 = \mathbf{12 \text{ } \mu\text{g/L}}$$

Chronic Aquatic Life:

$$SCV = SAV/SACR$$

$$SACR = 18$$

$$SCV = 24.62/18 = 1.4 \mu\text{g/L}$$

Data

Table 1. GMAVs and SMAVs for 2,4,6-trichlorophenol

<u>Genus Mean Acute Value ($\mu\text{g/L}$)</u>	<u>Species</u>	<u>Species Mean Acute Value ($\mu\text{g/L}$)</u>	<u>Acute- Chronic Ratio</u>	<u>Reference Number</u>
3,633	Cladoceran <u>Daphnia magna</u>	2,200		1
	Cladoceran <u>Daphnia cucullata</u>	6,000		2
320	Bluegill <u>Lepomis macrochirus</u>	320		3

References

1. Kuhn, R.M., Pattard, K.D. Pernak, et al. 1989. Results of the harmful effects of selected water pollutants (anilines, phenols, aliphatic compounds) to Daphnia magna. Water Res. 23(4): 495-499.
2. LeBlanc, G.A. 1980. Acute toxicity of priority pollutants to water flea (Daphnia magna). Bull. Environ. Contam. Toxicol. 24(5): 684-691.
3. Buccafusco, R.J., S.J. Ells and G.A. Blanc 1981. Acute toxicity of priority pollutants to bluegill (Lepomis macrochirus). Bull. Environ. Contam. Toxicol. 26(4): 446-452.

Acronyms/Abbreviations

CAS RN	Chemical Abstract Service Registry Number
K _{ow}	Octanol-Water Partition Coefficient
P (superscript)	Predicted value
SAV	Secondary Acute Value
GMAV	Genus Mean Acute Value
SAF	Secondary Acute Factor
SMC	Secondary Maximum Concentration
SCC	Secondary Continuous Concentration
SACR	Secondary Acute-Chronic Ratio
FT	Flow-through
S	Static
U	Unmeasured
M	Measured
EVISTRA	Evaluation and Interpretation of Suitable Test Results in AQUIRE (EPA quality checking method/database)

Revision History

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