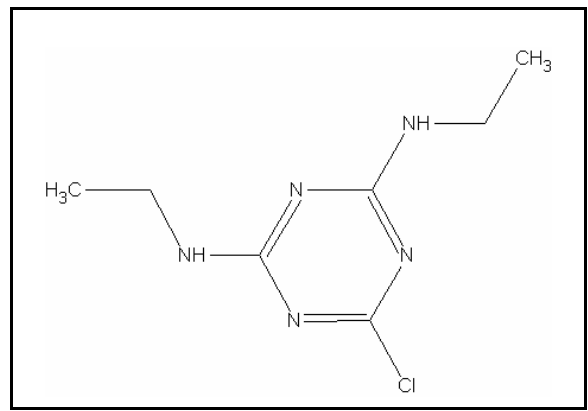




TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES

SIMAZINE

CAS RN: 122-34-9
Water Solubility: 0.0005 g/100 mL
Log K_{ow} : 2.087^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 simazine does not exceed 9 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 80 µg/L more than once every three (3) years on the average.

Calculations

Acute Aquatic Life:

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

$$\begin{aligned} \text{Lowest GMAV} &= 3,500 \text{ } \mu\text{g/L} \\ \text{SAF} &= 21.9 \end{aligned}$$

$$SAV = 3,500/21.9 = 159.8 \text{ } \mu\text{g/L}$$

$$SMC = SAV/2 = 159.8/2 = \mathbf{80 \text{ } \mu\text{g/L}}$$

Chronic Aquatic Life:

$$SCV = SAV/SACR$$

$$SACR = 18$$

$$SCV = 159.8/18 = \mathbf{9 \mu g/L}$$

Data

Table 1. GMAVs and SMAVs for simazine

<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>
>3,500	Cladoceran <u>Daphnia magna</u>	>3,500		1

References

1. Marchini, S., L. Passerini, D. Cesareo, and M.L. Tosato 1988. Herbicidal triazines: acute toxicity on Daphnia, fish, and plants and analysis of its relationships with structural factors. Ecotox. Environ. Saf. 16: 148-157.

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

February 19, 1999 Values first developed
September 19, 2001 New search for data. No studies added.

Contact Information

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