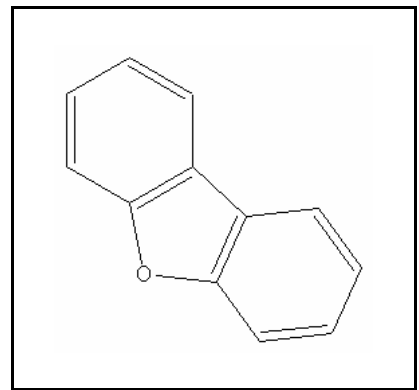




TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES

DIBENZOFURAN

CAS RN: 132-64-9
Water Solubility: <0.1 g/100 mL at 20 C
Log K_{ow}:



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 dibenzofuran does not exceed 7.3 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 65 µg/L more than once every three (3) years on the average.

Calculations

Acute Aquatic Life:

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

$$\text{Lowest GMAV} = 1700 \text{ } \mu\text{g/L}$$

$$\text{SAF} = 13.0$$

$$\text{SAV} = 1700/13.0 = 131 \text{ } \mu\text{g/L}$$

$$\text{SMC} = \text{SAV}/2 = 131/2 = \mathbf{65 \text{ } \mu\text{g/L}}$$

Chronic Aquatic Life:

$$SCV = SAV/SACR$$

$$SACR = 18$$

$$SCV = 131/18 = 7.3 \mu\text{g/L}$$

Data

Table 1. GMAVs and SMAVs for dibenzofuran

<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>
1850	Fathead Minnow <u>Pimephales promelas</u>	1850		1
1700	Cladoceran <u>Daphnia magna</u>	1700		2

References

1. Geiger, D.L., D.J. Call, and L.T. Brooke 1988. Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol 4. Center for Lake Superior Environmental Studies, University of Wisconsin, Superior, WI: 335 p.
2. LeBlanc, G.A. 1980. Acute toxicity of priority pollutants to water flea (Daphnia magna). Bull. Environ. Contam. Toxicol. 24(5): 684-691.

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

January 3, 1997 Values first developed
May 16, 2001 New search for data. No new studies added.

Contact Information

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