Chemical Name: Urea
CAS # 57-13-6
Internal Code #
Developed by: Chris J. Skalski
Data Retrieval Date: 1-27-98
Fact Sheet Preparation Date: 2-27-06

ACUTE DATA

SPECIES	EC_{50}/LC_{50} (µg/l)	TEST TYPE[a]	DURATION (HOURS)	SMAV[b] (µg/l)	GMAV[b] (µg/l)	REFERENCE NUMBER
Cladoceran *Daphnia magna*	3,910,000	S,U	48	3,910,000	3,910,000	1
Guppy *Poecilia reticulata*	17,500,000	R,U	96	17,500,000	17,500,000	2

[a] S = static; R= renewal; U = unmeasured.
[b] SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.

CHRONIC DATA

SPECIES	CHRONIC VALUE (µg/l)	METHOD	SMCV[a] (µg/l)	GMCV[a] (µg/l)	REFERENCE NUMBER

None Available

[a] SMCV = Species Mean Chronic Value; GMCV = Genus Mean Chronic Value.

REFERENCES

1. Janssen, C.R., E.Q. Espiritu and G. Persoone. 1993. Evaluation of the New “Enzymatic Inhibition” Criterion for Rapid Toxicity Testing with *Daphnia magna*. In: A. Soares and P. Calow (Eds.), Progress in Standardization of Aquatic Toxicity Tests, Lewis Publishers:71-81.

2. Chouhan, M.S. and A.K. Pandey. 1987. On the Tolerance Limits and Toxicity Symptoms of Guppy (*Lebistes reticulatus*) to Fertilizers: Urea and Ammonium Sulphate. Comp. Physiol. Ecol. 12(2):77-80.

CALCULATION OF ACUTE AQUATIC VALUE (AAV)[a]

Data Requirement OAC 3745-1-36(A)(1)	SPECIES	GMAV (µg/l)
(c)	Guppy	17,500,000
(d)	*Daphnia magna*	3,910,000

Secondary Acute Factor (SAF) = 13.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
= 3,910,000 ÷ 13.0
= 300,769 = 300,000 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
= 300,769 ÷ 2
= 150,385 = 150,000 µg/l

CALCULATION OF CHRONIC AQUATIC VALUE (CAV)[a]

Experimentally determined Acute-Chronic Ratios (ACRs):

SPECIES	ACUTE VALUE (µg/l)	CHRONIC VALUE (µg/l)	ACUTE-CHRONIC RATIO	SPECIES MEAN ACR

None Available

Secondary Acute-Chronic Ratio (SACR) = $\sqrt[3]{(18)(18)(18)} = 18$

Chronic Aquatic Value (CAV) = SAV ÷ SACR
= 300,769 ÷ 18
= 16,709 = 17,000 µg/l

[a]See Ohio Administrative Code 3745-1-36 effective February 22, 2002.