11-20-86

128850
Shaughnessy No.

Completed: 12/12/84
Revised: 04/29/85 JB
11/20/86 CMN

EEB Chemical Profile
(HOE-39866)
Monoammonium-2-amino-4-(hydroxymethylphosphinyl)butanoate

100.0 Fish and Wildlife Toxicology

100.1 Minimum Requirements

100.1.1 Avian Dietary LD_{50}

Species	Test Material	Result	Category	Reference
Mallard duck (Anas platyrhynchos)	Tech., 95.3%	> 2000 mg/kg	Core	Accession No. 072967
Bobwhite quail (Colinus virginianus)	Tech., 95.3%	> 2000 mg/kg	Core	Accession No. 072967
Japanese Quail (Coturnix c. japonica)	Tech., 95.3%	> 2000 mg/kg	Invalid	Accession No. 072967

100.1.2 Avian Dietary LC_{50}

Species	Test Material	Result	Category	Reference
Japanese Quail (Coturnix c. japonica)	Tech., 95.3%	> 5000 ppm	Supplemental	Accession No. 072967
Bobwhite (C. virginianus)	Tech., 95.3%	> 5000 ppm	Core	Accession No. 256761
Mallard (A. platyrhynchos)	Tech., 95.3%	> 5000 ppm	Core	Accession No. 256761

100.1.3 Fish Acute LC_{50}

Species	Test Material	Result	Category	Reference
Rainbow trout (Salmo gairdneri)	Tech., 95.3%	> 320 mg/L	Core	Accession Nos. 072967 and 256761
Rainbow trout (Salmo gairdneri)	Soluble concentrate (HOE 039866-OH-SL19-A127)	12.27 mg/L	Invalid	Accession Nos. 072967 and 256761
		14.86 mg/L	Invalid	Accession Nos. 072967 and 256761

Species	Test Material	Result	Category	Reference
Rainbow trout (Salmo gairdneri)	Soluble Conc. (16.22%)	26.7 mg/L (18-56)	Core for formulation	Accession No. 263027
Pumpkinseed sunfish (Lepomis gibbosus)	Tech., 97.4%	> 320 mg/L	Core	Accession No. 072967, also 256761
Bluegill sunfish (Lepomis macrochirus)	Soluble Conc. HOE 039866-OH-SL19-A126	59.9 mg/L	Supplemental (Core for formulation test)	Accession No. 072967, also 256761
Bluegill sunfish (Lepomis macrochirus)	Soluble Conc. (16.22%)	65 mg/L (56-75)	Core for formulation	Accession No. 263027

101.1.4 Aquatic Invertebrate LC_{50}

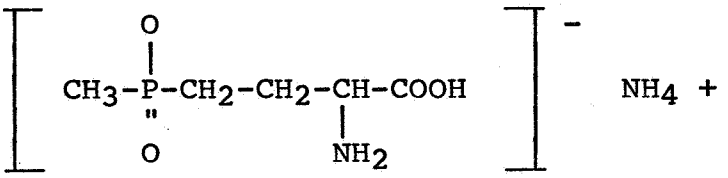
Species	Test Material	Result	Category	Reference
Waterflea (Daphnia magna)	Tech., 97.4%	667.56 mg/L (595.7-747.1)	Core	Accession No. 072967 and 256761
Daphnia magna	Soluble Conc. HOE 039866-OH-SL19-A126 (19%)	79.5 mg/L (63.?-102)	Supplemental (Core for formulation	Accession No. 072967 and 256761
	Soluble Conc. HOE 039866-OH-SL19-A126	58.78 mg/L 32.04 mg/L	Supplemental Supplemental	Accession No. 072967 and 256967
Daphnia magna	Soluble conc. (16.22%)	15 mg/L (10-32)	Core for formulation	Accession No. 263027

102.0 Physical and Chemical Properties

102.1 Chemical Name

Monoammonium 2-amino-4-(hydroxymethylphosphinyl)butanoate

102.2 Structural Formula



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102.3 Common Name (Company Code)

HOE-39866

102.4 Trade Name

Ignite

102.5 Molecular Weight

198.1

102.6 Physical State

	Pure AI	Technical
Color:	White	White to light brown
Physical form:	Crystalline powder	Crystalline powder
Odor:	Weakly pungent	Odorless to weak pungent
Melting point:	ca. 488 K (215 °C) under decomposition	ca. 488 K (215 °C) under decomposition
Boiling point:	Not determinable, because of decomposition of the active ingredient at its melting range.	
Density:	1.4 g/cm^3 at 20 °C	1.4 g/cm^3 at 20 °C
pH (1% in distilled H_2O):		4.7 $\pm$ 1

102.7 Properties

102.7.1 Solubility

Water:	ca. 1370 g/L $\pm$ 11% at 22 °C
Ethyl alcohol:	ca. 65 mg/100 mL at 20 °C
Acetone:	ca. 16 mg/100 mL at 20 °C
Toluene:	ca. 14 mg/100 mL at 20 °C
N-hexane:	ca. 20 mg/100 mL at 20 °C
Ethyl acetate:	ca. 14 mg/100 mL at 20 °C

102.7.2 Octanol/Water Partition Coefficient

< 0.1

102.7.3 Soil Adsorption Coefficient K_d

Not known.

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102.7.4 Vapor Pressure

Not determinable, because of decomposition of the active ingredient by warming up.

103.0 Behavior in the Environment

Submitted environmental fate studies have been found to be inadequate to fulfill the requirements of the Exposure Assessment Branch. Since these studies have not been fully evaluated at this time, the results will not be summarized in this chemical profile.

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JB

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100 Fish And Wildlife Toxicology

Species	Test Material	Result	Category	Reference
100.1 Minimum Requirements				
100.1.1 Avian Dietary LD_{50}				
Mallard Duck (*Anas platyrhynchos*)	Tech.,95.3%	> 2000 mg/kg	Core	Acc. No. 072967
Bobwhite Quail (*Colinus virginianus*)	Tech.,95.3%	> 2000 mg/kg	Core	"
Japanese Quail (*Coturnix c. japonica*)	Tech.,95.3%	> 2000 mg/kg	Invalid	"
100.1.2 Avian Dietary LC_{50}				
Japanese Quail (*Coturnix c. japonica*)	Tech., 95.3%	>5000 ppm	Supplemental	Acc. No. 072967
Bobwhite (*C. virginianus*)	Tech., 95.3%	>5000 ppm	Core	Acc. No. 256761
Mallard (*A. platyrhynchos*)	Tech., 95.3%	>5000 ppm	Core	Acc. No. 256761
100.1.3 Fish Acute LC_{50}				
Rainbow Trout (*Salmo gairdneri*)	Tech., 95.3%	> 320 mg/l	Core	Acc. Nos. 072967 and 256761
Rainbow Trout	Soluble concentrate HOE 039866-OH-SL19-A127	12.27 mg/l	Invalid	"
		14.86 mg/l	Invalid	"

Species	Test Material	Result	Category	Reference
Pumpkinseed Sunfish (*Lepomis gibbosus*)	Tech., 97.4%	> 320 mg/l	Core	Acc No. 072967 also 256761
Bluegill Sunfish (*Lepomis macrochirus*)	Soluble conc. HOE 039866-OH-SL19-A126	LC_{50} = 59.9	Supplemental (Core for formulation test)	Acc No. 072967 also 256761

100.1.4 Aquatic Invertebrate LC_{50}

Waterflea (*Daphnia magna*)	Tech., 97.4%	667.56 mg/l (595.7-747.1)	Core	Acc. No. 072967 and 256761
Daphnia magna	Soluble Conc. HOE 039866-OH-SL19-A126	79.5 mg/l (63.2-102)	Supplemental (Core for formulation)	"
	Soluble Conc. HOE 039866-OH-SL19-A127	58.78 mg/l	Supplemental	"
		32.04 mg/l	Supplemental	