

## Material Safety Data Sheet

Version 4.4  
Revision Date 01/07/2013  
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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methamidophos  
Product Number : 33395  
Brand : Fluka  
Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555  
Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption

## Target Organs

Central nervous system, Heart, Blood, Eyes

## GHS Classification

Acute toxicity, Oral (Category 2)  
Acute toxicity, Inhalation (Category 2)  
Acute toxicity, Dermal (Category 2)  
Eye irritation (Category 2B)  
Acute aquatic toxicity (Category 1)

## GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled  
H320 Causes eye irritation.  
H400 Very toxic to aquatic life.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash hands thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing.  
P284 Wear respiratory protection.  
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

P310 present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor/ physician.

## HMIS Classification

Health hazard: 3  
Chronic Health Hazard: \*  
Flammability: 1  
Physical hazards: 0

## NFPA Rating

Health hazard: 3  
Fire: 1  
Reactivity Hazard: 0

## Potential Health Effects

Inhalation May be fatal if inhaled. May cause respiratory tract irritation.  
Skin May be fatal if absorbed through skin. May cause skin irritation.  
Eyes May cause eye irritation.  
Ingestion May be fatal if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : O,S-Dimethyl phosphoramidothioate

Formula : C<sub>2</sub>H<sub>8</sub>NO<sub>2</sub>PS

Molecular Weight : 141.13 g/mol

Component	Concentration
<b>Methamidophos</b>	
CAS-No.	10265-92-6
EC-No.	233-606-0
Index-No.	015-095-00-4

## 4. FIRST AID MEASURES

## General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

## In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

## In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIREFIGHTING MEASURES

## Conditions of flammability

Not flammable or combustible.

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

## Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Oxides of phosphorus

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	crystalline
Colour	colourless

### Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 42 - 45 °C (108 - 113 °F)
Boiling point	no data available

Flash point	212 °C (414 °F) - closed cup
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.310 g/cm3
Water solubility	soluble
Partition coefficient: n-octanol/water	log Pow: -0.93
Relative vapor density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Corrodes metal, Copper

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Oxides of phosphorus  
Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 7.5 mg/kg

#### Inhalation LC50

LC50 Inhalation - rat - 4 h - 162 mg/m3

#### Dermal LD50

LD50 Dermal - rabbit - 100 mg/kg

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

Skin - rabbit - No skin irritation

### Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

Genotoxicity in vitro - mouse - Other cell types  
Cytogenetic analysis

Genotoxicity in vitro - mouse - Other cell types  
Sister chromatid exchange

Genotoxicity in vivo - mouse - Oral  
Micronucleus test

Genotoxicity in vivo - mouse - Skin  
Micronucleus test

Genotoxicity in vivo - mouse - Intraperitoneal  
Sister chromatid exchange

Genotoxicity in vivo - mouse - Intraperitoneal  
Micronucleus test

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity

Reproductive toxicity - mouse - Oral

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.

#### Teratogenicity

Developmental Toxicity - rat - Oral

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear.

#### Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

#### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

#### Aspiration hazard

no data available

#### Potential health effects

Inhalation	May be fatal if inhaled. May cause respiratory tract irritation.
Ingestion	May be fatal if swallowed.
Skin	May be fatal if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

#### Signs and Symptoms of Exposure

Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered heart rate, and/or a fall in blood pressure as a result of their action at cholinergic nerve sites., Nausea, Vomiting, Dizziness, Drowsiness, Confusion., Weakness, Muscle cramps/spasms., Change in pupil size., Fever, Seizures., Incoordination., Convulsions, Coma.

#### Synergistic effects

no data available

#### Additional Information

RTECS: TB4970000

## 12. ECOLOGICAL INFORMATION

### Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 1.28 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0.27 mg/l - 48 h

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 178 mg/l - 96 h

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### PBT and vPvB assessment

no data available

### Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 2811 Class: 6.1 Packing group: II  
Proper shipping name: Toxic solids, organic, n.o.s. (Methamidophos)  
Reportable Quantity (RQ):  
Marine Pollutant: No  
Poison Inhalation Hazard: No

### IMDG

UN number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Methamidophos)  
Marine Pollutant: Marine pollutant

### IATA

UN number: 2811 Class: 6.1 Packing group: II  
Proper shipping name: Toxic solid, organic, n.o.s. (Methamidophos)

## 15. REGULATORY INFORMATION

### OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Methamidophos

CAS-No.	Revision Date
10265-92-6	1993-04-24

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Methamidophos	CAS-No. 10265-92-6	Revision Date 1993-04-24
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**Pennsylvania Right To Know Components**

Methamidophos	CAS-No. 10265-92-6	Revision Date 1993-04-24
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**New Jersey Right To Know Components**

Methamidophos	CAS-No. 10265-92-6	Revision Date 1993-04-24
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**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION****Further information**

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