

## Material Safety Data Sheet

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Version 1.2

According to 91/155/EEC

## 1 - Product and Company Information

Product Name	PHENTOAT
Product Number	46079
Company	Sigma-Aldrich Sweden AB Solkraftsvagen 14C S-13570 Stockholm
Technical Phone #	46 8 742 42 00
Fax	46 8 742 42 43
Emergency Phone #	Giftinformationscentralen 112

## 2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
PHENTOATE	2597-03-7	219-997-0	015-097-00-5

Formula	C12H17O4PS2
Molecular Weight	320.36 AMU
Synonyms	Acetic acid, (O,O-dimethyldithiophosphorylphenyl)-, ethyl ester * BAY 33051 * Bayer 18510 * Benzeneacetic acid, alpha-((dimethoxyphosphinothioyl)thio)-, ethyl ester * Cidemul * Cidial * Cidial ULV * Dimefenthroat * Dimephenthioate * Dimephenthioate * O,O-Dimethyl S-(1-carboethoxybenzyl) dithiophosphate * O,O-Dimethyl S-alpha-ethoxycarbonylbenzyl phosphorodithioate * O,O-Dimethyl-S-(phenylacetic acid ethyl ester) phosphorodithioate * O,O-Dimethyl S-(phenyl)(carboethoxy)methyl phosphorodithioate * (Dimethyl S-(phenylethoxycarbonylmethyl)phosphorothiolothio nate) * Elsan * Elsan ULV * ENT 23,438 * ENT 27386 * ENT 27386GC * S-alpha-Ethoxycarbonylbenzyl O,O-dimethyl phosphorodithioate * S-alpha-Ethoxycarbonylbenzyl dimethyl phosphorothiolothionate * Ethyl alpha-((dimethoxyphosphenothioyl)thio)benzeneacet ate * Ethyl O,O-dimethylphosphorodithioylphenylacetate *

## 3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Harmful in contact with skin and if swallowed.

## 4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

#### AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

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### 5 - Fire Fighting Measures

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#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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### 6 - Accidental Release Measures

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PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL  
Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

#### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

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## 9 - Physical and Chemical Properties

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Appearance	Physical State: Liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

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## 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Phosphorous oxides, Sulfur oxides.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## 11 - Toxicological Information

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RTECS NUMBER: AI7875000

### ACUTE TOXICITY

LD50

Oral

Rat

71 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Miosis (pupilliary constriction). Lungs, Thorax, or Respiration:Dyspnea. Gastrointestinal:Hypermotility, diarrhea.

LC50  
Inhalation  
Rat  
59 mg/m3  
4H

LD50  
Skin  
Rat  
700 mg/kg

LD50  
Oral  
Mouse  
138 mg/kg

LD50  
Skin  
Mouse  
2620 mg/kg

LD50  
Subcutaneous  
Mouse  
1472 MG/KG

LD50  
Oral  
Dog  
500 mg/kg

LD50  
Oral  
Rabbit  
72 mg/kg

LD50  
Oral  
Guinea pig  
377 mg/kg

LD50  
Oral  
Chicken  
56.6 mg/kg  
Remarks: Behavioral:Somnolence (general depressed activity).  
Behavioral:Convulsions or effect on seizure threshold.

LD50  
Oral  
Quail  
300 mg/kg

LD50  
Oral  
Bird  
218 mg/kg

#### 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. Exposure can cause: Headache. Nausea. Vomiting. Dizziness. Drowsiness. Confusion. Weakness. Muscle cramps/spasms. Change in pupil size. Fever. Seizures. Incoordination. Convulsions. Coma.

#### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.  
Skin Absorption: Readily absorbed through skin. Toxic if absorbed through skin.  
Eye Contact: May cause eye irritation.  
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. Toxic if inhaled.  
Ingestion: Toxic if swallowed.

#### TARGET ORGAN INFORMATION

Central nervous system. Heart. Blood. Eyes. Lungs. G.I. System.

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#### 12 - Ecological Information

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#### 13 - Disposal Considerations

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#### SUBSTANCE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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#### 14 - Transport Information

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#### RID/ADR

UN#: 3018  
Class: 6.1  
PG: I  
Proper Shipping Name: Organophosphorus pesticide, liquid, toxic

#### IMDG

UN#: 3018  
Class: 6.1  
PG: I  
Proper Shipping Name: Organophosphorus pesticide, liquid, toxic  
Marine Pollutant: No  
Severe Marine Pollutant: No  
Technical Name: Required

#### IATA

UN#: 3018  
Class: 6.1  
PG: I  
Proper Shipping Name: Organophosphorus pesticide, liquid, toxic  
Inhalation Packing Group I: No  
Technical Name: Required

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#### 15 - Regulatory Information

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#### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 015-097-00-5  
INDICATION OF DANGER: Xn

Harmful.  
R-PHRASES: 21/22  
Harmful in contact with skin and if swallowed.  
S-PHRASES: 22 36/37  
Do not breathe dust. Wear suitable protective clothing and gloves.

SWITZERLAND  
SWISS POISON CLASS: 3

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## 16 - Other Information

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### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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