1 - Product and Company Information

Product Name: DL-PHOSPHINOTHRICIN AMMONIUM
Product Number: P9186
Company: Sigma-Aldrich Chemie BV
Postbus 27
3330 AA Zwijndrecht
Netherlands
Technical Phone #: 31-78-620-5411
Fax: 31-78-620-5421
E-mail Address: eurtechserv@sial.com
Emergency Phone #: 112

2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful if swallowed.

3 - Composition/Information on Ingredients

Product Name: DL-PHOSPHINOTHRICIN AMMONIUM
CAS #: 77182-82-2
EC no: 278-636-5
Annex I Index Number: 015-155-00-X

Formula: C5H12NO4P.H3N
Molecular Weight: 198,200 AMU
Synonyms:
- 2-Amino-4-(hydroxymethylphosphinyl)butanoic acid monoammonium salt * Ammonium
- (3-amino-3-carboxypropyl)methylphosphinate * Ammonium
- 2-amino-4-(hydroxymethylphosphinyl)butanoate * Ammonium glufusinate * Ammonium
- (DL-homoalanine-4-yl)methylphosphinate * Basta *
- Finale * Finale 14SL * Glufosinate-ammonium *
- HOE 00661 * HOE 39866 * Ignite

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.
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.

5 - Fire Fighting Measures

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.

6 - Accidental Release Measures

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.

7 - Handling and Storage

HANDLING
Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep tightly closed.
Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance

Physical State: Solid

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
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<tbody>
<tr>
<td>pH</td>
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<tr>
<td>BP/BP Range</td>
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<tr>
<td>MP/MP Range</td>
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<tr>
<td>Flash Point</td>
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<td>Oxidizing Properties</td>
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<td>Explosive Properties</td>
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<tr>
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<tr>
<td>Solubility</td>
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</table>

10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: EK7713600

ACUTE TOXICITY
LC50
Inhalation
Rat
1.260, mg/m3
4 H

LDLO
Oral
Woman
1600 UL/KG

LD50
Oral
Rat
1620,000000 mg/kg

LD50
Skin
Rat
> 2000,000000 mg/kg

LD50
Intraperitoneal
Rat
83 MG/KG

LD50
Subcutaneous
Rat
61 MG/KG

LD50
Oral
Mouse
416,000000 mg/kg

LD50
Intraperitoneal
Mouse
82 MG/KG

LD50
Subcutaneous
Mouse
88 MG/KG

LD50
Oral
Dog
200,000000 mg/kg

IRRITATION DATA
Skin
Rabbit
Remarks: No irritation effect
Eyes
Rabbit
Remarks: No irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.

CONDITIONS AGGRAVATED BY EXPOSURE
The toxicological properties have not been thoroughly investigated.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 100 MG/KG
Route of Application: Oral
Exposure Time: (7-16D PREG)
Result: Maternal Effects: Other effects.

12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout)
Time: 96,0 h
Value: 710,000 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 48,0 h
Value: 560,000 mg/l

13 - Disposal Considerations

SUBSTANCE DISPOSAL
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. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR
Non-hazardous for road transport.

IMDG
Non-hazardous for sea transport.

IATA
Non-hazardous for air transport.

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 015-155-00-X
INDICATION OF DANGER: Xn
  Harmful.
R-PHRASES: 22
  Harmful if swallowed.

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 1
ID-Number: 2129
Classification according to appendix 3.

16 - Other Information

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 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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