1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product Description: Phoenix Merlin

Other means of identification
Item#: 12P-0021
UN-No UN2902
Synonyms Not Available
Registration number(s) 70506-276

Recommended use of the chemical and restrictions on use
Recommended use Insecticide.
Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet
Supplier Address United Phosphorus Inc.
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406

Emergency telephone number
Company Phone Number 1-800-438-6071
Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 673-6671 (24hrs)

2. Hazards Identification

Classification
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral Category 4
Acute toxicity - Inhalation (Gases) Category 1
Acute toxicity - Inhalation (Vapors) Category 3
Acute toxicity - Inhalation (Dusts/Mists) Category 2
FLAMMABLE LIQUIDS Category 4

Label elements

EMERGENCY OVERVIEW

DANGER

hazard statements HARMFUL IF SWALLOWED
Fatal if inhaled
combustible liquid
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
In case of inadequate ventilation wear respiratory protection
Do not spray on an open flame or other ignition source
Wear protective gloves/protective clothing/eye protection/face protection
Ground/bond container and receiving equipment

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

OTHER INFORMATION

3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abamectin B1a</td>
<td>65195-55-3</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Abamectin B1b</td>
<td>65195-56-4</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Abamectin</td>
<td>71751-41-2</td>
<td>1.9</td>
<td></td>
</tr>
</tbody>
</table>

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye contact
Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact
Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.

Inhalation
Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Ingestion

Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water afterwards. Do not induce vomiting without medical advice. Call a physician.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects

No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician

Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Use: Dry chemical. Carbon dioxide (CO2). Water spray. alcohol-resistant foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Remove all sources of ignition. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

Environmental Precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Clean-Up

Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labelled containers. Take precautionary measures against static discharges.

7. Handling and Storage

Precautions for safe handling

Handling

Do not breathe vapours or spray mist. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat, sparks and open flame. - No smoking. Wear personal protective equipment. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use product only in closed system.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Protect from light. Keep in properly labelled containers.
8. Exposure Controls/Personal Protection

Exposure guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering controls
Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Personal protective equipment

Eye/Face Protection
Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.

Skin protection
Wear protective gloves/clothing. Socks and footwear.

Respiratory protection
Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

General hygiene considerations
When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>VALUES</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>4.5 °C / 40 °F</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>61 °C / 142 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
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<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td></td>
</tr>
<tr>
<td>Flammability limit in air</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
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<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
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<td></td>
</tr>
<tr>
<td>vapor pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
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<tr>
<td>Specific gravity</td>
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<td>Water solubility</td>
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</tr>
<tr>
<td>Solubility in Other Solvents</td>
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<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
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<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
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<td></td>
</tr>
<tr>
<td>decomposition temperature</td>
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<tr>
<td>Viscosity, kinematic</td>
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</tr>
<tr>
<td>Dynamic viscosity</td>
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<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

OTHER INFORMATION

Softening point
No information available
10. Stability and Reactivity

Reactivity
no data available

Chemical stability
Stable under normal conditions. Hazardous polymerisation does not occur.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Heating in air.

incompatible materials
No information available.

Hazardous decomposition products
Carbon oxides.

11. Toxicological Information

Information on Likely Routes of Exposure

Product information
Abamectin =
Oral LD50 (rat) = 1750 mg/kg
Dermal LD50 (rabbit) = >5050mg/kg
Inhalation LC50 ( rat ) = 2.56 mg/L
Skin irritation (rabbit) = Non-irritating
Eye irritation (rabbit) = Severe irritation
Skin Sensitization (guinea pig) = Non-sensitizer

Inhalation
May cause irritation of respiratory tract. Large exposures may be fatal.

Eye contact
Causes substantial but temporary eye injury.

Skin contact
May be absorbed through the skin in harmful amounts.

Ingestion
HARMFUL IF SWALLOWED.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abamectin 71751-41-2</td>
<td>-</td>
<td>-</td>
<td>= 1100 mg/m² ( Rat ) 4 h</td>
</tr>
</tbody>
</table>

Information on Toxicological Effects

Symptoms
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

sensitization
No information available.

Mutagenic effects
No information available.

Carcinogenicity
There are no known carcinogenic chemicals in this product.

Reproductive effects
Not Available.

STOT - Single Exposure
No information available.

STOT - repeated exposure
No information available.

Chronic toxicity
Avoid repeated exposure.

Aspiration hazard
No information available.

Numerical Measures of Toxicity - Product information
The following values are calculated based on chapter 3.1 of the GHS document.

- **LD50 Oral**: 1750 mg/kg (rat)
- **LD50 Dermal**: > 5050 mg/kg (rat)
- **LC50 Inhalation**: Inhalation LC50 2.56 mg/l

### 12. Ecological Information

**Ecotoxicity**
May be toxic to aquatic invertebrates Highly toxic to bees

101.9% of the mixture consists of components(s) of unknown hazards to the aquatic environment

**Persistence/Degradability**
No information available.

**Bioaccumulation/Accumulation**
No information available.

**Other Adverse Effects**
No information available

### 13. Disposal Considerations

**Waste Treatment Methods**

**Waste Disposal Method**
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Contaminated packaging**
Refer to product label.

### 14. Transport Information

**DOT**

- **UN-No**: UN2902
- **Proper shipping name**: Pesticide, liquid, toxic, n.o.s (Abamectin)
- **Hazard class**: 6.1
- **Packing group**: PG III

**ICAO**

- **UN-No**: UN2902
- **Proper shipping name**: Pesticide, liquid, toxic, n.o.s (Abamectin)
- **Hazard class**: 6.1
- **Packing group**: PG III

**IATA**

- **UN-No**: UN2902
- **Proper shipping name**: Pesticide, liquid, toxic, n.o.s (Abamectin)
- **Hazard class**: 6.1
- **Packing group**: PG III

**IMDG/IMO**

- **UN-No**: UN2902
- **Proper shipping name**: Pesticide, liquid, toxic, n.o.s (Abamectin)
15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**Signal word**  
WARNING!

**Ventilation Control**  
PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through the skin. Toxic to fish and aquatic invertebrates. Highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds.

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>USINV</td>
<td>Not determined</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Not determined</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Does not comply</td>
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<tr>
<td>ENCS</td>
<td>Does not comply</td>
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<tr>
<td>China</td>
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<tr>
<td>KECL</td>
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<tr>
<td>PICCS</td>
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<td>AICS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>TSCA</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>

**Federal Regulations**

**SARA 313**  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values</th>
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<tbody>
<tr>
<td>Abamectin - 71751-41-2</td>
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**SARA 311/312 Hazardous**

**Categorization**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Status</th>
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<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**CERCLA**
SARA Product RQ 0

RCRA

Pesticide Information

State Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>CATEGORY</th>
<th>California Prop. 65</th>
<th>Non-additive, corrosive chemical type</th>
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</thead>
<tbody>
<tr>
<td>Abamectin</td>
<td>71751-41-2</td>
<td>Developmental</td>
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<td></td>
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<tr>
<td>71751-41-2 (1.9)</td>
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</table>

State Right-to-Know

<table>
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<tr>
<th>Chemical name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
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</thead>
<tbody>
<tr>
<td>Abamectin</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

International regulations

U.S. EPA Label information

EPA Pesticide registration number Not applied

16. Other Information

NFPA HEALTH 4 flammability 2 Instability 0 Physical hazard -

Preparation Date 23-Jun-2015
Revision date 06-Nov-2015
Revision Summary Correct spelling error(s)

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End of MSDS