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

Product identifier
Product Description: Satellite Hydrocap

Other means of identification
Product code 12-230AA
UN/ID no. UN3082
Registration number(s) 70506-230

Recommended use of the chemical and restrictions on use
Recommended use Pre-emergence weed control.
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)

<table>
<thead>
<tr>
<th>Acute toxicity - Inhalation (Vapors)</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

DANGER

Hazard Statements
Toxic if inhaled
May cause an allergic skin reaction
Precautionary Statements - Prevention
Do not get in eyes, on skin, or on clothing
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician

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
• Very toxic to aquatic life with long lasting effects
• Very toxic to aquatic life
• May be harmful in contact with skin

3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pendimethalin [N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzeneamine]</td>
<td>40487-42-1</td>
<td>38.7</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 a poison control center or doctor for treatment advice. Remove and wash contaminated clothing before re-use.

Inhalation
Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects
no data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed
Notes to physician

Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media  no data available.

Specific hazards arising from the chemical
No information available.


Explosion data

Protective equipment and precautions for firefighters
Use personal protective equipment. 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
Avoid contact with skin and eyes. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

Environmental Precautions

Environmental precautions Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Methods and material for containment and cleaning up

Methods for Clean-Up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Handling Pesticide applicator and workers must follow the label and Direction for Use in accordance with the EPA Worker’s Protection Standard. For manufacturing, blending or packaging the following recommendations are provided: Avoid contact with skin and eyes. Keep away from open flames, hot surfaces and sources of ignition. Do not eat, drink or smoke when using this product. Provide adequate ventilation. Remove all sources of ignition. Wash thoroughly after handling. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a cool, well-ventilated place. Keep at temperature above 15 F.

incompatible materials No information available.

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**
Where there is potential for eye contact have eye flushing equipment available. Use eye protection to avoid eye contact.

**Skin protection**
Long sleeved clothing. Chemical resistant gloves.

**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**
Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Wash hands and face before breaks and immediately after handling the product.

## 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>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance color</td>
<td>yellow-orange</td>
<td>Odor faint</td>
</tr>
<tr>
<td>color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7.72</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability limit in air</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>vapor pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.1705@ 20 C</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Remarks/ • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softening point</td>
<td>No information available</td>
</tr>
<tr>
<td>molecular weight</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content</td>
<td>No information available</td>
</tr>
<tr>
<td>Liquid Density</td>
<td>No information available</td>
</tr>
</tbody>
</table>

## 10. Stability and Reactivity
Reactivity
no data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials
No information available.

Hazardous decomposition products
None under normal use conditions.

11. Toxicological Information

Information on Likely Routes of Exposure

Product information
Pendimethalin 38.7% = Oral LD50 (rat) = >5,000 mg/kgDermal LD50 (rat/rabbit) = >5,000 mg/kg Inhalation LC50 (rat) = >5.39 mg/L (Max achievable breathing zone) 4 hrPrimary eye irritation (rabbit) = Not an eye irritantPrimary dermal irritation (rabbit) = Not a skin irritantDermal Sensitization = Not a sensitizer

Inhalation
May cause irritation of respiratory tract. Toxic if inhaled.

Eye contact
Moderately irritating to the eyes.

Skin contact
May be harmful if absorbed through the skin.

Ingestion
MAY BE HARMFUL IF SWALLOWED.

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 data available.

Carcinogenicity
The information below indicates whether any agency has listed any ingredient as a carcinogen.

Reproductive effects
Not Available.

STOT - Single Exposure
no data available.

STOT - Repeated Exposure
no data available.

Aspiration hazard
No information available.

Numerical Measures of Toxicity - Product information

LD50 Oral
> 5000 mg/kg (rat)

LD50 Dermal
> 5000 mg/kg (rat)

LC50 Inhalation
Inhalation LC50 > 5.39 mg/l

12. Ecological Information

IMDG - Marine Pollutant.
12-230AA Satellite Hydrocap

Revision date 04-Dec-2018

ecotoxicity

Pendimethalin:
Rainbow trout 96 hr LC50 = 0.89 mg/L
Daphnia Magna 48 hr EC50 = 0.979 mg/L
Green algae 72 hr EC50 = 0.0081 mg/L
Mallard duck LD50 = 1421 mg/kg
Honey Bee LD50 = 49.8 ug/bee

Persistence/Degradability
no data available.

Bioaccumulation/ Accumulation
No information available.

Other Adverse Effects
no data 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
When shipped domestically by highway in non-bulk containers this product can be shipped as Not regulated.

UN/ID no. UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s (Pendimethalin)
Hazard class 9
Packing group PG III
IMDG - Marine Pollutant IMDG - Marine Pollutant.

TDG
When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1

UN/ID no. UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Pendimethalin)
Hazard class 9
Packing group PG III
Marine Pollutant: Y or N [List Ingredient(s) with %] Marine pollutant.

ICAO

UN/ID no. UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s (Pendimethalin)
Hazard class 9
Packing group PG III
Description IMDG - Marine Pollutant
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**

**CAUTION**

**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 moderate eye irritation. Harmful if swallowed or absorbed through the skin. Toxic to fish.

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>USINV</td>
<td>Not present</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Not present</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Not Present</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not Present</td>
</tr>
<tr>
<td>China</td>
<td>Not Present</td>
</tr>
<tr>
<td>KECL</td>
<td>Not Present</td>
</tr>
<tr>
<td>PICCS</td>
<td>Not Present</td>
</tr>
<tr>
<td>AICS</td>
<td>Not Present</td>
</tr>
<tr>
<td>TSCA</td>
<td>Not Present</td>
</tr>
</tbody>
</table>

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**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 Title 40 of the Code of Federal Regulations, Part 372:

- Acute health hazard: yes
- Chronic health hazard: NO
- Fire hazard: No
- Sudden release of pressure hazard: No
Reactive Hazard  No

CERCLA
Not applicable

CERCLA
SARA Product RQ  0

RCRA
Pesticide Information

State Regulations

State Right-to-Know
Not applicable

International regulations
U.S. EPA Label information
EPA Pesticide registration number  70506-230

16. Other Information

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HEALTH</th>
<th>flammability</th>
<th>Instability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Preparation Date  05-May-2015
Revision date  04-Dec-2018
Revision Summary  3 year cycle update***

Disclaimer
United Phosphorus, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with other materials or in any process. Further, since the conditions and methods of use are beyond the control of United Phosphorus, Inc. and United Phosphorus Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

End of SDS