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

Product identifier
Product Description: Moccasin Herbicide

Other means of identification
Item#: 12U-323
Synonyms Not Available
Registration number(s) 70506-323

Recommended use of the chemical and restrictions on use
Recommended use Herbicide
Uses advised against Non labeled activities Activities contrary to label recomendation

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)

| Serious eye damage/eye irritation | Category 2A |
| FLAMMABLE LIQUIDS                  | Category 4   |

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard Statements
Causes serious eye irritation
combustible liquid

PAGE 1 / 8
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Do not spray on an open flame or other ignition source

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

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

Hazards Not Otherwise Classified (HNOC)
OTHER INFORMATION
• Causes mild skin irritation
• Very toxic to aquatic life with long lasting effects

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>S-METOLACHLOR</td>
<td>87392-12-9</td>
<td>87.3</td>
<td></td>
</tr>
<tr>
<td>calcium dodecylbenzene sulfonate</td>
<td>26264-06-2</td>
<td>1 - 5</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
Remove contaminated clothing and shoes. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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

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

Unsuitable extinguishing media
No information available.

Specific hazards arising from the chemical
No information available.

Explosion data

Protective equipment and precautions for firefighters
Use personal protective equipment. In the event of fire, wear self contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Avoid contact with skin and eyes. Use personal protective equipment.

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
Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Keep away from flames and hot surfaces. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

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

incompatible materials
Strong oxidizing agents. Strong acids.

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
Ensure adequate ventilation, especially in confined areas.

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. Safety glasses with side-shields.

Skin protection
Wear protective gloves/clothing. Chemical resistant footwear plus socks.

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
General hygiene considerations
Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Wear suitable gloves and eye/face protection. Wash hands 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, Emulsifiable concentrate (EC)</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Yellow to brown</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild chemical</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>4.3</td>
<td>(1% aq)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information 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>95 °C / 203 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td>No information available</td>
</tr>
<tr>
<td>Flammability limit in air</td>
<td></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>1.1042 kg/l</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
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<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 information 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>
<tr>
<td>Softening point</td>
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<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>VOC Content</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
<td></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.

Hazardous polymerization
No information available.

Conditions to avoid
Keep away from open flames, hot surfaces and sources of ignition.
incompatible materials
Strong oxidizing agents. Strong acids.

Hazardous decomposition products

11. Toxicological Information

Information on Likely Routes of Exposure

Inhalation
May cause irritation of respiratory tract.

Eye contact
Moderately irritating to the eyes.

Skin contact
May be absorbed through the skin.

Ingestion
HARMFUL IF SWALLOWED.

Component Information
Metolachlor
Acute oral LD50 = 1063-1936 mg/kg (rat)
Acute dermal LD50 = >2000 mg/kg (rabbit)
Acute inhalation LC50 = >2910 mg/m³ (4hr rat)
Not an eye or skin irritant (rabbit)
May cause sensitization (guinea pig)

Information on Toxicological Effects

Symptoms
No information available.

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

Sensitization
May cause sensitization by skin contact.

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 - No information available

12. Ecological Information

ecotoxicity
No information available

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
When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated. When shipped in bulk, by vessel, or internationally use the IMDG shipping description:

IATA
<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN3082</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Environmentally hazardous substance, liquid, n.o.s S-metolachlor</td>
</tr>
<tr>
<td>Hazard class</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Description</td>
<td>Marine Pollutant</td>
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</table>

IMDG/IMO
<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN3082</th>
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<td>Proper shipping name</td>
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<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>EmS No.</td>
<td>F-A, S-F</td>
</tr>
<tr>
<td>Special Provisions</td>
<td>274, 335</td>
</tr>
<tr>
<td>Marine Pollutant</td>
<td>Marine Pollutant</td>
</tr>
</tbody>
</table>

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.

Harmful if absorbed through the skin. Harmful if swallowed. Causes moderate eye irritation. Keep out of Reach of Children.

International Inventories
<table>
<thead>
<tr>
<th>International Inventories</th>
<th>USINV</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Does not comply</td>
<td>Does not comply</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>
12U-323 Moccasin Herbicide

KECL Does not comply
PICCS Does not comply
AICS Does not comply
TSCA Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
This product is a registered pesticide and therefore is exempt from TSCA requirements.

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 does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous
Categorization
- Acute health hazard: yes
- Chronic health hazard: yes
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium dodecylbenzene sulfonate</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>26264-06-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>RQ</th>
<th>CERCLA EHS RQs</th>
<th>RQ</th>
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<tbody>
<tr>
<td>calcium dodecylbenzene sulfonate</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
<td>RQ 454 kg final RQ</td>
</tr>
<tr>
<td>26264-06-2</td>
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CERCLA

<table>
<thead>
<tr>
<th>Component</th>
<th>RQ</th>
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</thead>
<tbody>
<tr>
<td>calcium dodecylbenzene sulfonate</td>
<td>1000 lb</td>
</tr>
<tr>
<td>26264-06-2 (1 - 5)</td>
<td></td>
</tr>
</tbody>
</table>

RCRA

Pesticide Information

State Regulations

State Right-to-Know

International regulations

U.S. EPA Label information
EPA Pesticide registration number 70506-323

16. Other Information

NFPA HEALTH 2 flammability 0 Instability 0 Physical hazard -

Preparation Date 26-Sep-2016
Revision date 06-Oct-2016
Revision Summary Update section 14 Update Section 9

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End of MSDS