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

Product identifier
Product Description: SuperTin 4L

Other means of identification
Item#: RAM05
UN-No UN 3020
Synonyms Not Available
Registration number(s) 70506-212

Recommended use of the chemical and restrictions on use
Recommended use Fungicide.
Uses advised against 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)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

hazard statements
Harmful in contact with skin
Fatal if inhaled
CAUSES SKIN IRRITATION
Causes serious eye damage
Suspected of causing cancer
Suspected of damaging fertility or the unborn child
Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Wear cold insulating gloves/face shield/eye protection
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
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor if you feel unwell
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
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

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

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

3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade secret</th>
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</thead>
<tbody>
<tr>
<td>Triphenyltin hydroxide</td>
<td>76-87-9</td>
<td>40</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
Skin contact
Rinse skin immediately with plenty of water for 15-20 minutes. Call 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 poison control center or doctor for further treatment advice.

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 information available.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician**
Treat symptomatically.

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**5. Fire-fighting measures**

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

**Unsuitable extinguishing media**
No information available.

**Specific hazards arising from the chemical**
No information available.

**Hazardous combustion products**
Diphenyltin hydroxide, monophenyltin hydroxides, and metallic tin under fire conditions.

**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.

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**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions**
Avoid contact with the skin and the eyes. Use personal protective equipment. Remove all sources of ignition.

**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**
Do not eat, drink or smoke when using this product. Do not breathe vapours or spray mist. Remove and wash contaminated clothing before re-use.
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
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240 (d) (4-6) ] , the handler PPE requirements may be reduced or modified as specified in the WPS.

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. Goggles. or. Face-shield.

Skin protection
Long sleeved clothing. Long pants. Chemical resistant gloves. Chemical resistant apron. Select respirator with an organic vapor cartridge with prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with organic vapor cartridge or canister with any N,P,R, or HE filter.

Respiratory protection
Select respirator with an organic vapor cartridge with prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with organic vapor cartridge or canister with any N,P,R, or HE filter.

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

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
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<tr>
<th>Property</th>
<th>VALUEs</th>
<th>Remarks/ Method</th>
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</thead>
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<td>flammability (solid, gas)</td>
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<td>Flammability limit in air</td>
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<td>Upper Flammability Limit</td>
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<td>Solubility in Other Solvents</td>
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<td>Partition coefficient: n-octanol/water</td>
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<td>decomposition temperature</td>
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<td>Viscosity, kinematic</td>
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<td>Dynamic viscosity</td>
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<td>Explosive properties</td>
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<tr>
<td>Explosive properties</td>
<td>No information available</td>
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</table>
Oxidizing properties  No information available

OTHER INFORMATION

Softening point  No information available
molecular weight  No information available
VOC Content  No information available
density  No information available
Bulk density  10 lb/gal

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  Not known.
incompatible materials  No information available.
Hazardous decomposition products  Diphentlytin hydroxide, monophenylltin hydroxide, and metallic tin (Organic acid vapors).

11. Toxicological Information

Information on Likely Routes of Exposure

Product information  SuperTin 4L:
Oral LD50 = 250 mg/kg in male rats
Oral LD50 = 315 mg/kg in female rats
Dermal LD50 = 2000 mg/kg in rabbits
Inhalation 4 hr LC50 = 0.062 mg/L in male rats
Inhalation 4 hr LC50 = 0.029 mg/L in female rats
Eye = moderate to severely irritating to the eyes
Skin = moderate to severe skin irritation

Rats and mice exhibited non-specific weight loss and reduced food consumption upon ingestion. In tests with laboratory animals, ingestion produced altered lymphocyte, white blood cell, and immunoglobulin counts.
Repeated inhalation produced lung and respiratory irritation and edema in rats.

Inhalation  Fatal if inhaled.
Eye contact  Causes irreversible eye damage.
Skin contact  Irritating to skin. May be harmful if absorbed through the skin.
Ingestion  MAY BE FATAL 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  No information available.
sensitization  No information available.


Mutagenic effects
Carcinogenicity

No information available.

Super Tin 4L:
90 day neurotoxicity study = No evidence of neurotoxicity up to the highest level tested (80 ppm)

Animal data using Triphenyltin hydroxide show an increase in pituitary and testicular tumors in rats and an increase in liver tumors in mice.

Developmental effects were seen to exposure levels producing other toxic effects in the adult animal when tested with Triphenyltin hydroxide.

2-generation reproduction study with Triphenyltin hydroxide in rats produced a decreased litter size and effects on the liver and spleen weight at exposure levels lower than where parental toxicity was observed.

3-generation study with Triphenyltin hydroxide in rats resulted in retardation of testicular development but did not effect testicular damage or fertility.

Triphenyltin hydroxide did not produce genetic damage in bacterial cell cultures or in animals.

Reproductive effects
STOT - Single Exposure
STOT - repeated exposure
Aspiration hazard

Not Available.
No information available.
No information available.

Numerical Measures of Toxicity - Product information

LD50 Oral 250-315 mg/kg (rat)
LD50 Dermal 2000 mg/kg (rabbit)
LC50 Inhalation: Inhalation LC50 0.082 mg/l

12. Ecological Information

Yes - when shipped in bulk.

ecostoxicity

Supertin 4L
96 hr LC50 Rainbow trout = 0.049 mg/L
Channel catfish = 2.5 ppm
Daphnia magna 48 hr EC50 = 0.012 mg/L

Persistence/Degradability
No information available.

Bioaccumulation/ Accumulation
No information available.

Other Adverse Effects
No information available

13. Disposal Considerations

Waste Treatment Methods

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  UN 3020
Proper shipping name  Organotin pesticides, liquid, toxic, (Triphenyltin hydroxide 40%)
Hazard class  6.1
Packing group  PG I
Marine Pollutant  Yes - when shipped in bulk.

ICAO
UN-No  UN 3020
Proper shipping name  Organotin pesticides, liquid, toxic (Triphenyltin hydroxide 40%)
Hazard class  6.1
Packing group  PG I
Description  Marine Pollutant

IATA
UN-No  UN 3020
Proper shipping name  Organotin pesticides, liquid, toxic (Triphenyltin hydroxide 40%)
Hazard class  6.1
Packing group  PG I
Description  Marine Pollutant

IMDG/IMO
UN-No  UN 3020
Proper shipping name  Organotin pesticides, liquid, toxic (Triphenyltin hydroxide 40%)
Hazard class  6.1
Packing group  PG I
EmS No.  F-A, S-A
Marine Pollutant  This product contains a chemical which is listed as a severe marine pollutant according to IMDG/IMO

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  DANGER!

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.

POISON. Keep out of Reach of Children. Fatal if inhaled. Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through the skin. Toxic to fish. Toxic to wildlife.

International Inventories
USINV  Not determined
DSL/NDSL  Not determined
EINECS/  Does not comply
ELINCS
ENCS
China
KECL
PICCS
AICS
TSCA

Does not comply

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values</th>
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<tbody>
<tr>
<td>Triphentlytin hydroxide - 76-87-9</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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

CERCLA

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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<tbody>
<tr>
<td>Triphentlytin hydroxide</td>
<td>76-87-9</td>
<td>Carcinogen</td>
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<td>76-87-9 (40)</td>
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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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<tbody>
<tr>
<td>Triphentlytin hydroxide</td>
<td>X</td>
<td>X</td>
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</table>

International regulations

U.S. EPA Label information
EPA Pesticide registration number: Not applied

16. Other Information

<table>
<thead>
<tr>
<th>NFPA HEALTH</th>
<th>flammability</th>
<th>Instability</th>
<th>Physical hazard</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
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</table>

Preparation Date: 06-May-2015
Revision date: 04-Nov-2015
Revision Summary: Correct spelling error(s)

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End of MSDS