



# Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 05-Aug-2015

Revision date 06-Aug-2015

Revision Number: 1

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

### Product identifier

Product Description: Surflan Flex T & O Herbicide

### Other means of identification

Item#: 12U-FLEXTO  
UN-No UN3082  
Synonyms Not Available  
Registration number(s) 70506-308

### Recommended use of the chemical and restrictions on use

Recommended use Herbicide.  
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 - Inhalation (Dusts/Mists)

Category 4

### Label elements

### EMERGENCY OVERVIEW

#### WARNING

#### hazard statements

HARMFUL IF INHALED

Toxic to aquatic life



appearance Opaque Orange

Physical state viscous liquid

Odor Slight aromatic

**Precautionary Statements - Prevention**

Do not get in eyes, on skin, or on clothing  
Use only outdoors or in a well-ventilated area

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor if you feel unwell

**Hazards Not Otherwise Classified (HNOC)****OTHER INFORMATION**

- May be harmful in contact with skin
- Toxic to aquatic life

### 3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Oryzalin	19044-88-3	34.1	
Glycerin	56-81-5	<30	

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**

<b>Eye contact</b>	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.
<b>Skin contact</b>	Take off contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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** No information available.

### 5. Fire-fighting measures

**Suitable extinguishing media**

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

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

No information available.

**Hazardous combustion products** Oxides of nitrogen. Can emit toxic fumes 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.

**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.

**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. 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. Do not breathe vapours or spray mist. 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 container tightly closed in a dry and well-ventilated place.

**incompatible materials** Potassium permanganate.

**8. Exposure Controls/Personal Protection**

**Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Glycerin		TWA: 15 mg/m <sup>3</sup> mist, total particulate fraction (vacated) TWA: 10 mg/m <sup>3</sup> mist, total particulate fraction TWA: 5 mg/m <sup>3</sup> mist, respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> mist, respirable fraction

**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. 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.

**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 programs must comply with 29 CFR 1910.134.

### General hygiene considerations

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. Remove and wash contaminated clothing before re-use.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Physical state</b>	viscous liquid	<b>Odor</b>	Slight aromatic
<b>appearance</b>	Opaque Orange		
<b>color</b>	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
<b>pH</b>	6.18	
<b>Melting point/freezing point</b>	7.18	
<b>Boiling Point/Range</b>	No information available	
<b>Flash Point</b>	> 93 °C / > 199 °F	
<b>Evaporation Rate</b>	No information available	
<b>flammability (solid, gas)</b>	No information available	
<b>Flammability limit in air</b>		
<b>Upper Flammability Limit</b>	No information available	
<b>Lower Flammability Limit</b>	No information available	
<b>vapor pressure</b>	No information available	
<b>Vapor Density</b>	No information available	
<b>Specific gravity</b>	1.144	
<b>Water solubility</b>	No information available	
<b>Solubility in Other Solvents</b>	No information available	
<b>Partition coefficient: n-octanol/water</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>decomposition temperature</b>	No information available	
<b>Viscosity, kinematic</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

### OTHER INFORMATION

<b>Softening point</b>	No information available
<b>molecular weight</b>	No information available
<b>VOC Content</b>	No information available
<b>density</b>	No information available
<b>Bulk density</b>	No information available

## 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

Keep away from open flames, hot surfaces and sources of ignition.

### incompatible materials

Potassium permanganate.

**Hazardous decomposition products**

Toxic gases and fumes may be formed if product is involved in fire. Oxides of nitrogen.

**11. Toxicological Information**

Information on Likely Routes of Exposure

**Product information**

Surflan Flex  
 Acute oral LD50 (rat, female) = >5,000 mg/kg  
 Acute dermal LD50 = >5,000 mg/kg  
 Acute inhalation LC50 = >2.05 mg/L  
 Primary eye irritation = Not irritating  
 Skin irritation = Slight but cleared up within 24 hours  
 Sensitization = Not a sensitizer

**Inhalation** May cause irritation of respiratory tract. Harmful by inhalation.

**Eye contact** May cause slight irritation.

**Skin contact** Skin exposure may result in rashes, numbing, burning or tingling sensation which is reversible and usually subsides within 12 hours.

**Ingestion** MAY BE HARMFUL IF SWALLOWED.

**Component Information**

SurflanFlex  
 Acute oral LD50 (rat, female) = >5,000 mg/kg  
 Acute dermal LD50 = >5,000 mg/kg  
 Acute inhalation LC50 (rat) = >2.05 mg/L  
 Primary eye irritation = Non-irritating  
 Skin irritation = Slightly irritating but cleared up within 24 hours  
 Sensitization = Not a sensitizer

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Oryzalin 19044-88-3	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 4.79 mg/L
Glycerin 56-81-5	-	> 10 g/kg ( Rabbit )	570 mg/m <sup>3</sup> ( Rat ) 1 h

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** The information below indicates whether any agency has listed any ingredient as a carcinogen.  
**Reproductive effects** Not Available.  
**STOT - Single Exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target organ effects** kidney, Respiratory System, EYES, skin.  
**Aspiration hazard** No information available.

Numerical Measures of Toxicity - Product information

**LD50 Oral** > 5,000 mg/kg (rat)  
**LD50 Dermal** > 5,000 mg/kg (rat) 0 mg/l (mist) (dust) mg/m<sup>3</sup>  
**LC50 Inhalation:** Inhalation LC50 > 2.05 mg/l

**12. Ecological Information**

Y.

**ecotoxicity**

Oryzalin:

Highly toxic to aquatic organisms LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species. Slightly toxic to birds on an acute basis LD50 between 501 and 2000 mg/kg.

Bobwhite quail acute oral LD50 1046 mg/kg

Honeybee acute oral LD50 >100 ug/bee

**Persistence/Degradability**

No information available.

**Bioaccumulation/ Accumulation**

Bioaccumulative potential.

Chemical name	Log Pow
Oryzalin 19044-88-3	> 2
Glycerin 56-81-5	-1.76

**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. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. Do not apply directly to wetlands or water.

**Contaminated packaging**

Refer to product label.

**14. Transport Information**

**DOT**

**UN-No** UN3082  
**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s (Oryzalin)  
**Hazard class** 9  
**Packing group** PG III  
**Marine Pollutant** Y.

**ICAO**

**UN-No** UN3082  
**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s (Oryzalin)  
**Hazard class** 9  
**Packing group** PG III

**Description** Marine Pollutant

**IATA**

**UN-No** UN3082  
**Proper shipping name** Environmentally hazardous substances, liquid, n.o.s (Oryzalin)  
**Hazard class** 9  
**Packing group** PG III  
**Description** Marine Pollutant

**IMDG/IMO**

**UN-No** UN3082  
**Proper shipping name** Environmentally hazardous substances, liquid, n.o.s (Oryzalin)  
**Hazard class** 9  
**Packing group** PG III  
**Marine Pollutant** Yes

## 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.

**Keep out of Reach of Children. Toxic to fish.**

**International Inventories**

**USINV** Not determined  
**DSL/NDSL** Not determined  
**EINECS/ELINCS** Does not comply  
**ENCS** Does not comply  
**China** Does not comply  
**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

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

Chemical name	SARA 313 - Threshold Values
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Oryzalin - 19044-88-3	1.0
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**SARA 311/312 Hazardous**

**Categorization**

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

**CERCLA**

SARA Product RQ 0

**RCRA**

**Pesticide Information**

**State Regulations**

Component	CAS-No	CATEGORY	California Prop. 65	Non-additive, corrosive chemical type
Oryzalin 19044-88-3 ( 34.1 )	19044-88-3	Carcinogen	Carcinogen	

**State Right-to-Know**

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Oryzalin		X			
Glycerin	X	X	X		

**International regulations**

**U.S. EPA Label information**

EPA Pesticide registration number 70506-308

**16. Other Information**

**NFPA** HEALTH 1 flammability 2 Instability 0 Physical hazard -

Preparation Date 05-Aug-2015  
 Revision date 06-Aug-2015

Revision Summary  
 Update to GHS format

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End of MSDS