



# Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 07-May-2015

Revision date 07-May-2015

Revision Number: 1

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

### Product identifier

Product Description: Surflan AS AG

### Other means of identification

Item#: 12U-125A  
UN-No UN3082  
Synonyms Not Available  
Registration number(s) 70506-43

### 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

UPI  
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



appearance opaque orange

Physical state 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

### 3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Oryzalin	19044-88-3	40.9	
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 poison control center or doctor for treatment advice. Wash face, hands and any exposed skin thoroughly after handling.
<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 physician or poison control center immediately.
<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** No information available.

**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**

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 the skin and the eyes. Use personal protective equipment. Wear protective gloves/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** Keep out of reach of children. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place.

**incompatible materials** No materials to be especially mentioned.

**8. Exposure Controls/Personal Protection**

**Exposure guidelines**

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

**Skin protection**

Long sleeved clothing. Long pants. 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

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>	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>
pH	5.9	
Melting point/freezing point	6.9 °C / 44 °F	
Boiling Point/Range	No information available	
Flash Point	>93 C >200 F	
Evaporation Rate	No information available	
flammability (solid, gas)	No information available	
Flammability limit in air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
vapor pressure	No information available	
Vapor Density	No information available	
Specific gravity	1.138 to 1.239 @ 25 C	
Water solubility	No information available	
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	
decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
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	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

No materials to be especially mentioned.

### 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

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye contact</b>	Moderately irritating to the eyes.
<b>Skin contact</b>	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
<b>Ingestion</b>	MAY BE HARMFUL IF SWALLOWED.

### **Component Information**

Oryzalin -

In animals has been shown to cause liver, kidney, bladder, spleen, and/or blood effects. Repeated excessive exposure to crystalline silica may affect lung function and cause silicosis, a progressive and disabling disease of the lungs. Some evidence suggests that kidney effects may also result from excessive exposure.

Propylene glycol: Single exposure studies indicate that this material is practically non-toxic if swallowed (rat LD50 21,000 mg/kg) or absorbed through skin (rabbit LD50 20,800 mg/kg) and slightly irritating to rabbit eyes and skin. This material is widely used in antifreeze, hydraulic fluids, pharmaceutical solvents, food and cosmetics. Workplace experience has shown this material to have low acute and systemic toxicity. Human patch tests indicate that repeated contact causes mild irritation. Although there have been some reports of skin sensitization, studies with large groups of humans and use in topical medical applications suggest that these are likely irritant rather than sensitization responses. Repeated administration in the diet or through drinking water to rats and dogs showed essentially no adverse effects other than slight liver toxicity. Similar studies in cats showed increase in Heinz body formation in the red blood cells without anemia. Long-term oral studies in rats, dogs, and cats have shown no evidence of carcinogenic or target organ effects other than increased red blood cell turnover. Long-term inhalation exposure in monkeys showed no adverse effects. Developmental toxicity studies in mice, rats, rabbits and hamsters showed no increased birth defects or other adverse effects on the fetus. Mice and cats had no adverse effects on reproductive ability or development and survival of offspring. No genetic changes were observed in tests using bacteria, animal cells, or animals. Glycerin: No skin allergy was observed in guinea pigs or humans following repeated exposure. Oral administration in clinical use has caused nausea and vomiting. Repeated or long-term oral exposure produced no adverse effects in rats. No adverse effects on fertility or birth defects were observed in rats or their offspring following oral exposure before and during pregnancy. Generally, no genetic changes were observed in tests using bacteria or animal cells.

Single exposure studies indicate that this material is practically non-toxic if swallowed (rat LD50 12,600- 27,200 mg/kg) or absorbed through skin (rabbit LD50 >10,000 mg/kg), no more than slightly toxic if inhaled (rat 1 hr LC50 >0.57 mg/l), and slightly irritating to rabbit eyes and skin.

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

**Reproductive effects** carcinogen.  
**STOT - Single Exposure** Not Available.  
**STOT - repeated exposure** No information available.  
**Target organ effects** No information available.  
**Aspiration hazard** kidney, Respiratory System, EYES, skin.  
 No information available.

**Numerical Measures of Toxicity - Product information**

The following values are calculated based on chapter 3.1 of the GHS document . 5290 mg/kg (rat) 1697.9 mg/kg (rat) 0 mg/l (mist) (dust) mg/m<sup>3</sup> 0 ml/m<sup>3</sup> (Vapor)

**12. Ecological Information**

Marine Pollutant.

**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**

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

**IATA**

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

**IMDG/IMO**

<b>UN-No</b>	UN3082
<b>Proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s (Oryzalin)
<b>Hazard class</b>	9
<b>Packing group</b>	PG III
<b>Marine Pollutant</b>	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. Causes moderate eye irritation. Prolonged or frequent repeated skin contact may cause allergic reaction in some individuals. Toxic to fish.**

**International Inventories**

<b>USINV</b>	Not determined
<b>DSL/NDSL</b>	Not determined
<b>EINECS/ ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>China</b>	Does not comply
<b>KECL</b>	Does not comply
<b>PICCS</b>	Does not comply
<b>AICS</b>	Does not comply
<b>TSCA</b>	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
Oryzalin - 19044-88-3	1.0

**SARA 311/312 Hazardous**

**Categorization**

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

**CERCLA**

SARA Product RQ 0

**RCRA**

**Pesticide Information**

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Oryzalin 19044-88-3 ( 40.9 )			X	
Glycerin 56-81-5 ( <30 )			X	

**State Regulations**

Component	CAS-No	CATEGORY	California Prop. 65	Non-additive, corrosive chemical type
Oryzalin 19044-88-3 ( 40.9 )	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 70506-43

**16. Other Information**

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

Preparation Date 07-May-2015

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Revision Summary

Update to GHS format

**End of MSDS**