



Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 05-Aug-2015

Revision date 07-Dec-2015

Revision Number: 2

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

Product identifier

Product Description: Surflan Flex

Other means of identification

Item#: 12U-FLEX
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**

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	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.
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 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 ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ 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

Physical state	viscous liquid	Odor	Slight aromatic
appearance	Opaque Orange		
color	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
pH	6.18	
Melting point/freezing point	7.18	
Boiling Point/Range	No information available	
Flash Point	> 93 °C / > 199 °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	1.144	
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

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.

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 ³ (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)
LC50 Inhalation: Inhalation LC50 > 2.05 mg/l

12. Ecological Information

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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****Proper shipping name****Hazard class****Packing group****Marine Pollutant**

When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.

UN3082

Environmentally hazardous substance, liquid, n.o.s (Oryzalin)

9

PG III

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ICAO**UN-No****Proper shipping name****Hazard class****Packing group****Description**

UN3082

Environmentally hazardous substance, liquid, n.o.s (Oryzalin)

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PG III

Marine Pollutant

IATA**UN-No****Proper shipping name****Hazard class****Packing group**

UN3082

Environmentally hazardous substances, liquid, n.o.s (Oryzalin)

9

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/NDL Not determined
 EINECS/ Does not comply
 ELINCS
 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/NDL - 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:

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 yes
 Sudden release of pressure hazard No

Reactive Hazard

No

CERCLA

SARA Product RQ 0

RCRAPesticide InformationState 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 regulationsU.S. EPA Label information

EPA Pesticide registration number 70506-308

16. Other InformationNFPA

HEALTH 1

flammability 2

Instability 0

Physical hazard -

Preparation Date 05-Aug-2015

Revision date 07-Dec-2015

Revision Summary

Update section 14

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End of MSDS