



Preparation Date 21-Apr-2015

Revision date 31-Dec-2018

Revision Number: 4

# Safety Data Sheet

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

### Product identifier

Product Description: Asulox Herbicide

### Other means of identification

Product code 12U-109  
Registration number(s) 70506-139

### 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

UPL NA 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 - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Skin Corrosion/Irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

### Label elements

#### EMERGENCY OVERVIEW

**DANGER**

#### Hazard Statements

Harmful in contact with skin  
HARMFUL IF INHALED  
CAUSES SKIN IRRITATION  
Causes serious eye damage  
May cause an allergic skin reaction

**Appearance** brown**Physical state** Liquid**Odor** odorless**Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection

Do not get in eyes, on skin, or on clothing

Use only outdoors or in a well-ventilated area

Wash face, hands and any exposed skin thoroughly after handling

Contaminated work clothing should not be allowed out of the workplace

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

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

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

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

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

- MAY BE HARMFUL IF SWALLOWED
- Very toxic to aquatic life
- Very toxic to aquatic life with long lasting effects

### 3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Asulam sodium	2302-17-2	35-37
Citric acid	77-92-9	2.1

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>	Remove and wash contaminated clothing before re-use. 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>	Call a physician or poison control center immediately. 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.
<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 data available.

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

**Notes to physician** No information available. Treat symptomatically.

### **5. Fire-fighting measures**

#### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Foam. Aquatic.

**Unsuitable extinguishing media** no data available.

#### **Specific hazards arising from the chemical**

No information available.

**Hazardous combustion products** Carbon oxides. Oxides of nitrogen. Sulfur oxides.

#### **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 skin and eyes. Provide adequate ventilation. 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** Sweep up and shovel into suitable containers for disposal.

### **7. Handling and Storage**

#### **Precautions for safe handling**

**Handling** Keep out of reach of children. Wear personal protective equipment. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

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

**Storage** Keep in a dry, cool and well-ventilated place. Do not transport or store below -6 C. Keep containers tightly closed in a cool, well-ventilated place.

**incompatible materials** Acids.

### **8. Exposure Controls/Personal Protection**

<b>Exposure guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering controls</b>	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.
<b><u>Personal protective equipment</u></b>	
<b>Eye/Face Protection</b>	Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.
<b>Skin protection</b>	Neoprene gloves. Nitrile rubber. Impervious butyl rubber gloves. Chemical resistant protective clothing.
<b>Respiratory protection</b>	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.
<b>General hygiene considerations</b>	
Do not eat, drink or smoke when using this product. 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.	

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Odor</b>	odorless
<b>Appearance</b>	brown		
<b>color</b>	No information available		
<b>Property</b>	<b><u>VALUES</u></b>	<b><u>Remarks/ • Method</u></b>	
<b>pH</b>	7.5		
<b>Melting point/freezing point</b>	8.5 °C / 47 °F		
<b>Boiling Point/Range</b>	104 °C / 219 °F		
<b>Flash Point</b>	No information available		
<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>	1.18 @ 20 C		
<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 data 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>	253.24 g/mol

<b>VOC Content</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	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

Freezing temperatures.

### incompatible materials

Acids.

### Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur.

## 11. Toxicological Information

### Information on Likely Routes of Exposure

#### **Product information**

Asulox:  
 Acute oral LD50: >5,000 mg/kg (rat)  
 Acute dermal LD50: >2,000 mg/kg (rabbit)  
 Acute inhalation LC50: >5 mg/L 4 hr (rat)  
 Skin irritation: Non-irritating (rabbit)  
 Eye irritation: Slightly irritating (rabbit)

**Inhalation** May cause irritation of respiratory tract. May be harmful if inhaled.

**Eye contact** May cause slight irritation.

**Skin contact** May cause irritation.

**Ingestion** May cause irritation. MAY BE HARMFUL 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

**Sensitization** No information available.  
**Mutagenic effects** no data available.  
**Carcinogenicity** Asulam:

The EPA has classified asulam as a Group C - possible human carcinogen - based on thyroid and adrenal tumors in rats. Carcinogenicity testing with Asulam sodium is not available. However, the EPA considers Asulam sodium as a "Possible Human Carcinogen" based on structure activity relationship.

Asulam or Asulam sodium is not listed as a carcinogen by the NTP, IARC or OSHA.

Mutagenicity  
No mutagenic effects were observed in studies performed with asulam.

Reproductive/Developmental Toxicity  
No reproductive or developmental effects (teratogenicity) were observed in studies performed with Asulam. .

**Reproductive effects**  
**STOT - Single Exposure**  
**STOT - Repeated Exposure**  
**Aspiration hazard**

Not Available.  
no data available.  
no data available.  
No information available.

#### Numerical Measures of Toxicity - Product information

**LD50 Oral** > 5000 mg/kg (rat)  
**LD50 Dermal** > 2000 mg/kg (rabbit)  
**LC50 Inhalation** > 20 mg/l ( 1 hr) (rat)

## 12. Ecological Information

#### ecotoxicity

Do not apply directly to water to areas where surface water is present or to intertidal areas below the mean high water mark. Do not clean equipment or dispose of equipment washwater in a manner that will contaminate water resources or areable land. Do not apply when weather conditions favor drift from treated areas.

#### Persistence/Degradability

no data available.

#### Bioaccumulation/ Accumulation

Bioaccumulative potential.

Chemical name	Log Pow
Citric acid 77-92-9	-1.72

#### Other Adverse Effects

no data 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**

Do not reuse empty containers. Refer to product label.

## 14. Transport Information

#### DOT

	NOT REGULATED
<b><u>TDG</u></b>	NOT REGULATED
<b><u>IATA</u></b>	NOT REGULATED
<b><u>IMDG</u></b>	NOT REGULATED

### 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. Harmful if absorbed through the skin. Prolonged or frequent repeated skin contact may cause allergic reaction in some individuals.**

#### **International Inventories**

<b>USINV</b>	Not present
<b>DSL/NDSL</b>	Not present
<b>EINECS/ ELINCS</b>	Not Present
<b>ENCS</b>	Not Present
<b>China</b>	Not Present
<b>KECL</b>	Not Present
<b>PICCS</b>	Not Present
<b>AICS</b>	Not Present
<b>TSCA</b>	Not Present

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

##### **CERCLA**

Not applicable

CERCLA

SARA Product RQ 0

RCRA

Pesticide Information

State Regulations

**State Right-to-Know**

Not applicable

International regulations

U.S. EPA Label information

EPA Pesticide registration number 70506-139

**16. Other Information**

NFPA

HEALTH 2

flammability 0

Instability 0

Physical hazard -

Preparation Date 21-Apr-2015

Revision date 31-Dec-2018

**Revision Summary**

Update logo Update section 1 Update Section 16\*\*\*

Disclaimer

UPL NA Inc. believes that the information and recommendations container herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with other materials or in any process. Further, since the conditions and methods of use are beyond the control of UPL NA Inc. and UPL NA Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

**End of SDS**