

SAFETY DATA SHEET

Issuing Date 28-Jun-2006

Revision Date 14-Oct-2019

Revision Number 4

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name **ASULAM 400 HERBICIDE**

Other means of identification

Product Code 2106100
CAS Number MIXTURE
Formula C₈H₉N₂NaO₄S
Synonyms Active ingredient: Carbamic Acid, ((4-Aminophenyl)Sulfonyl)-, Methyl Ester, Monosodium Salt; Asulam Sodium Salt
EPA Registration Number 2749-523

Recommended use of the chemical and restrictions on use

Recommended Use Agriculture
Uses advised against Do not use where contact with food or drinking water is possible. Avoid prolonged contact with eyes, skin, and clothing.

Details of the supplier of the safety data sheet

Supplier Address ACETO LIFE SCIENCES, LLC
4 Tri Harbor Court
Port Washington, NY 11050-4661
Phone: (516) 627-6000
Fax: (516) 627-6093
Email: aceto@aceto.com

Emergency Telephone Number(s)

ChemTrec: 1-800-424-9300 Outside of the United States: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin Corrosion/Irritation	Category 2
Carcinogenicity	Category 2

Label elements

Emergency Overview

Signal Word

Warning

Hazard statements

Harmful if swallowed
Harmful in contact with skin
Causes skin irritation
Suspected of causing cancer



Appearance
Yellow to Brown

Physical State
Liquid

Odor
Negligible

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
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
Specific treatment (see supplemental first aid instructions on this label)
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None known

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Active ingredient: Carbamic Acid, ((4-Aminophenyl)Sulfonyl)-, Methyl Ester, Monosodium Salt; Asulam Sodium Salt

Formula C₈H₉N₂NaO₄S

Chemical name	CAS No.	Weight-%	North American Hazard Indicator
Methylsulfanilycarbamate	2302-17-2	36.2	True
Other Ingredients	N/A	63.8	False

4. FIRST AID MEASURES

First Aid Measures

General Advice	Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control center immediately.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Call a physician or poison control center immediately.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
Ingestion	Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
Self-Protection of the First Aider	Use personal protective equipment as required. Avoid contact with eyes, skin and clothing.
<u>Most important symptoms and effects, both acute and delayed</u>	
Signs and Symptoms	No information available.
<u>Indication of any immediate medical attention and special treatment needed</u>	
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Flammable properties</u>	Not available.
<u>Suitable Extinguishing Media</u>	Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO ₂).
<u>Unsuitable Extinguishing Media</u>	No information available.
<u>Hazardous Combustion Products</u>	Thermal decomposition or combustion may produce hazardous gases and/or materials.
<u>Explosion Data</u>	Not available
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

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	Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid contact with eyes, skin and clothing. Use personal protective equipment as required. In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental Precautions	Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

Methods and material for containment and cleaning up

Methods for Clean-up Evacuate personnel to safe areas. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Avoid repeated exposure.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.

Incompatible Materials Strong Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methylsulfanilylcarbamate 2302-17-2	-	-	-
Other Ingredients N/A	-	-	-

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles.

Skin and body protection Use suitable eye protection and gloves.

Respiratory Protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Yellow to Brown
Physical State Liquid
Odor Negligible
Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7	
Melting point / Freezing point	(Asulam Sodium Salt) 212 - 215 °C	Literary Reference

Boiling point / boiling range	No information available	
Flash Point	No Data Available	No information available
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air	No information available	
Upper flammability limit	No information available	
Lower flammability limit	Not available	
Vapor Pressure	No information available	
Vapor Density	Not available	
Specific Gravity	1.18 g/ml	
Water Solubility	Soluble	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	Not available	
Autoignition temperature °C	No Data Available	Estimated
Decomposition temperature	No Data Available	
Kinematic Viscosity	No information available	
Dynamic Viscosity	Not available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	252.2
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available
Corrosion characteristics	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable.
Chemical Stability	Stable under normal conditions
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	Strong Acids.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO ₂). Nitrogen oxides (NO _x). Sulfur oxides. Sodium oxides.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION**Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methylsulfanilylcarbamate	= 2 g/kg (Rat)	> 2 g/kg (Rabbit) > 9400 µL/kg (Rat)	-
Other Ingredients	-	-	-

The following values are calculated based on chapter 3.1 of the GHS document .

Information on likely routes of exposure

Eyes	Avoid contact with eyes.
Skin	Harmful in contact with skin. Irritating to skin. Avoid contact with skin.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Harmful if swallowed. Do not take internally.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity	Suspected of causing cancer. EPA has classified asulam as a Group C, possible human carcinogen, based upon thyroid and adrenal tumors in the rat.
Irritation	Eye, rabbit: mild
Serious eye damage/irritation	No information available.
Skin Corrosion/Irritation	No information available.
Sensitization	No information available.
Reproductive Effects	No information available.
Mutagenic Effects	No information available.
Developmental Effects	No information available.
STOT - single exposure	No information available.
STOT - Repeated Exposure	No information available.
Chronic Toxicity	Avoid repeated exposure.
Target Organ Effects	Eyes, Skin, Thyroid, Adrenals.
Aspiration Hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

There is no known ecological information for this product

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Methylsulfanilylcarbamate 2302-17-2	-	-	-	-
Other Ingredients N/A	-	-	-	-

Persistence/Degradability No information available.

Bioaccumulation/Accumulation No information available.

Mobility in Soil No information available.

Chemical name	log Pow =
Methylsulfanilycarbamate 2302-17-2	-
Other Ingredients N/A	-

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods Contact waste disposal services. Dispose of in accordance to EPA Pesticide Label Instructions.

Contaminated Packaging Dispose of in accordance to EPA Pesticide Label Instructions.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Does not comply
Canada (DSL) Does not comply
EU (EINECS) Does not comply
EU (ELINCS) Does not comply
Japan (ENCS) Does not comply
China (IECSC) Does not comply
Korea (KECL) Does not comply
Philippines (PICCS) Does not comply
Australia (AICS) Does not comply
Mexico INV Does not comply
Taiwan INV Does not comply

Chemical name	U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)	
Methylsulfanilycarbamate	-	-	X	-	
Other Ingredients	-	-	-	-	
Component	Japan (ENCS)	China (IECSC)	Korea (KECL)	Philippines (PICCS)	Australia (AICS)

	-	-	-	-	Present
	-	-	-	-	-
Chemical name	Mexico INV		Taiwan INV		
Methylsulfanilylcarbamate 2302-17-2	-		-		
Other Ingredients N/A	-		-		

This material as a whole is exempt from the TSCA Inventory, FIFRA Regulated Pesticides, and Canadian PMRA Regulations.

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

VOC content

This Product does not contain any VOCs

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

This product does not contain any State Right-to-Know chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

Canada

WHMIS Statement

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

NFPA

Health 1

Flammability 0

Instability 0

Physical Hazard 0



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14-Oct-2019

Revision Summary

Not available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet