



Safety Data Sheet

Issue Date: 06-Aug-2008

Revision Date: 02-Jun-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name

Ethephon 2SL

Other means of identification

SDS #

MANA-004

Registration Number(s)

EPA Reg. No. 66222-151

UN/ID No

UN3265

Recommended use of the chemical and restrictions on use

Recommended Use

EPA registered pesticide.

Details of the supplier of the safety data sheet

Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604

Emergency Telephone Number

Company Phone Number

1-919-256-9300

Emergency Telephone (24 hr)

For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Translucent yellow liquid

Physical State Liquid

Odor Odorless

Classification

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage



Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a poison center or doctor/physician
 IF IN EYES: Rinse cautiously 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 (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
2-Chloroethylphosphonic acid	16672-87-0	21.0 - 22.4

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

- General Advice** When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
- Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
- Skin Contact** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Get medical attention if necessary.

Inhalation	If inhaled remove to fresh air. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Immediately call a physician.
Ingestion	Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage. Will irritate mucous membranes. May cause skin redness, irritation or swelling. Ingestion may cause severe burns to mouth, throat or stomach.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically. If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Dry chemical. Foam. Carbon dioxide (CO2).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Not determined.

Hazardous Combustion Products May include and are not limited to oxides of carbon and phosphorous. Hydrogen chloride.

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. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	For small spills, absorb with sand, clay, or other inert absorbent. Place in appropriate containers for disposal. For large spills: recover free product. Dike for later disposal. Absorb with inert material, and then place in suitable container for chemical waste.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Protect from excessive heat. Store locked up.

Incompatible Materials Strong bases. Strong oxidizing agents. Metals such as aluminum, tin, and zinc.

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

Appropriate engineering controls

Engineering Controls THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS OF END USE PRODUCTS CONTAINING THIS MATERIAL, CONSULT THE SDS OR PRODUCT LABEL FOR THE END USE PRODUCT.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Use splash goggles or face shield when contact may occur.

Skin and Body Protection Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

General Hygiene Considerations Wash hands before eating, drinking, smoking and using the toilet. Remove contaminated clothing promptly and wash thoroughly before reused.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Odorless
Appearance	Translucent yellow liquid	Odor Threshold	Not determined
Color	Translucent Yellow		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	1.65 @ ~25°C		
Melting Point/Freezing Point	Not applicable		
Boiling Point/Boiling Range	100 °C / 212 °F		
Flash Point	Not applicable		

Evaporation Rate	Not determined
Flammability (Solid, Gas)	Liquid-not applicable
Upper Flammability Limits	Not applicable
Lower Flammability Limit	Not applicable
Vapor Pressure	Not established
Vapor Density	Not determined
Specific Gravity	1.11
Water Solubility	Miscible in water
Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined
Bulk Density	11 lb/gal @ ~25°C

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Not known to occur.

Conditions to Avoid

Elevated temperatures.

Incompatible Materials

Strong bases. Strong oxidizing agents. Metals such as aluminum, tin, and zinc.

Hazardous Decomposition Products

May include but are not limited to: oxides of carbon, oxides of phosphorous. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-Chloroethylphosphonic acid 16672-87-0	= 3400 mg/kg (Rat)	= 5730 mg/kg (Rabbit)	= 90 mg/m ³ (Rat) 4 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Carcinogenicity Not classifiable as a human carcinogen.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not contaminate water used for irrigation or domestic purposes. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Avoid spray drift to nearby crops, as this product will cause modifications in plant growth. Plant injury or reduced yields may result.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinse is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA regional office. Never place any unused product down an indoor or outdoor drain. Do not contaminate water, food or feed by disposal.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances. Based on package size, product may be eligible for limited quantity exception.

DOT

UN/ID No UN3265
Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s. (ethephon)
Hazard Class 8
Packing Group III

IATA

UN/ID No UN3265
Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s. (ethephon)
Hazard Class 8
Packing Group III

IMDG

UN/ID No UN3265
Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s. (ethephon)
Hazard Class 8
Packing Group III

15. REGULATORY INFORMATION

International Inventories

TSCA All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

- 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 Chemical Substances/European 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*

US Federal Regulations

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

SARA 313

Not determined

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

EPA Pesticide Registration Number 66222-151

EPA Statement

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:

EPA Pesticide Label

Signal Word: DANGER

Corrosive: Causes irreversible eye damage. Wear safety goggles when handling. Harmful if swallowed or absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Do not inhale vapors, as this product will irritate mucous membranes.

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Danger	Danger
Acute toxicity - Oral	Harmful if swallowed	N/A
Acute toxicity - Dermal	Harmful if absorbed through the skin	May be harmful in contact with skin
Skin corrosion/irritation	N/A	Causes severe skin burns
Serious eye damage/eye irritation	Causes irreversible eye damage	Causes severe eye damage
STOT - single exposure	Will irritate mucous membranes	N/A

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	3	1	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	Not determined	Not determined	Not determined	Not determined

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 Revision Note: New format

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