1. IDENTIFICATION

Product Identifier

Product Name
Quali-Pro Ethephon 2SL

Other means of identification
SDS # MANA-004A
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.
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604
1-919-256-9300

Emergency Telephone Number
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

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Chloroethylphosphonic acid</td>
<td>16672-87-0</td>
<td>21.0 - 22.4</td>
</tr>
</tbody>
</table>

*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.

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.

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/PERSOANAL 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
Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Translucent yellow liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Translucent Yellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>1.65 @ ~25°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>100 °C / 212 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not applicable</td>
<td></td>
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</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not established</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
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</tr>
<tr>
<td>Specific Gravity</td>
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</tr>
<tr>
<td>Water Solubility</td>
<td>Miscible in water</td>
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</tr>
<tr>
<td>Solubility in other solvents</td>
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<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
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<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
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<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Chloroethylphosphonic acid 16672-87-0</td>
<td>= 3400 mg/kg (Rat)</td>
<td>= 5730 mg/kg (Rabbit)</td>
<td>= 90 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

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.
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 wash waters. 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

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
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

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

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

### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>See section 8</td>
</tr>
</tbody>
</table>

**Issue Date:** 06-Aug-2008  
**Revision Date:** 9-Oct-2015  
**Revision Note:** Updated format from 02-Jun-2014

**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 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**