Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/21/2015 Reviewed on 05/21/2015

* 1 Identification

· **Product identifier**

· **Trade name: Liquid Plant Food (Nutrients)**

· **Relevant identified uses of the substance or mixture and uses advised against**
Hydroponic plant nutrients

· **Product description**
AeroGrow liquid nutrient is a specially formulated mixture of plant nutrition minerals and filtered water that are combined in proportions to assure optimum plant nutrition. The product is an aqueous nitrate solution. The chemical identity of the compounds and exact proportions used in the mixture are a trade secret; however, they are derived from: ammonium nitrate, potassium nitrate, potassium phosphate, calcium nitrate and magnesium.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
AeroGrow International, Inc.
6075 Longbow Dr. Suite 200
Boulder, CO 80301
(800) 476-9669 or (303) 444-7755 (for product information)
Fax: (303) 444-0406
www.aerogarden.com

· **Emergency telephone number:** (800) 476-9669

* 2 Hazard(s) identification

· **Classification of the substance or mixture**
The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.

· **Label elements**

· **GHS label elements** Non-Regulated Material

· **Hazard pictograms** Non-Regulated Material

· **Signal word** Non-Regulated Material

· **Hazard statements** Non-Regulated Material

· **Unknown acute toxicity:**
21.7 percent of the mixture consists of ingredient(s) of unknown toxicity.

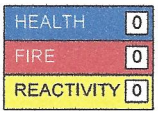
· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

NFPA Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **Hazard(s) not otherwise classified (HNOC):** None known

* 3 Composition/information on ingredients

CAS: 7732-18-5 RTECS: ZC 0110000	water, distilled, conductivity or of similar purity	60-90%

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· **Chemical characterization: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous Components:**		
CAS: 7778-77-0	Potassium Phosphate	5-10%
CAS: 6484-52-2 RTECS: BR9050000	Ammonium Nitrate Ox. Sol. 3, H272; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	5-10%
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate STOT SE 3, H335	5-10%
CAS: 10124-37-5	Calcium Nitrate Ox. Sol. 2, H272; Eye Irrit. 2A, H319	5-10%
CAS: 7757-79-1 RTECS: TT 3700000	Potassium Nitrate Ox. Sol. 2, H272	5-10%

* 4 First-aid measures

· **Description of first aid measures**
· **General information:**
Always have plenty of water available for first aid. Get medical attention if any symptoms develop or persist.
· **After inhalation:**
If a respiratory problem develops from dust or vapors, remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility. This is considered a highly unlikely event.
· **After skin contact:**
Generally the product does not irritate the skin.
If rash or irritation develops get medical attention. This is considered an unlikely event.
· **After eye contact:**
Not expected as a result of exposure to finished product.
If in eyes: Rinse cautiously for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. This is considered an unlikely event.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

* 5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
If incinerated, product will release the following toxic fumes: Oxides of carbon, potassium, phosphorous, nitrogen (NOx), molybdenum, copper, boron, manganese, sulfur, zinc, iron and calcium.
· **Advice for firefighters**
Product contains ammonium nitrate, potassium nitrate and calcium nitrate which are oxidizers and may release oxygen and intensify or fuel any fires. Use caution.

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· **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Not required. Safety glasses recommended.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling** Prevent formation of aerosols.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents, organic solvents, powdered metals, alkali metals, alkaline earth metals, cyanides, dimethylformamide, bromine trifluoride and thiocyanates.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**
Use appropriate ventilation in accordance with OSHA HazCom Standard 29 CFR 1910.1200.
· **Components with occupational exposure limits:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Not required.

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Trade name: Liquid Plant Food (Nutrients)

* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Liquid
Color:	Brown
· **Odor:**	Organic
· **Odor threshold:**	Not determined.
· **pH-value @ 20 °C (68 °F):**	3.0
· **Change in condition**	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	
Decomposition temperature:	Not determined.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	0.0 Vol %
Upper:	0.0 Vol %
· **Vapor pressure @ 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density @ 20 °C (68 °F):**	>1.000 g/cm³ (>8.345 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No further relevant information available.

* 10 Stability and reactivity

· **Reactivity** Under normal conditions of storage and use, hazardous reactions will not occur.
· **Chemical stability** Stable under normal conditions.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.

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· **Incompatible materials:**
Strong acids, strong bases, strong oxidizing agents, strong reducing agents, organic solvents, powdered metals, alkali metals, alkaline earth metals, cyanides, dimethylformamide, bromine trifluoride and thiocyanates.

· **Hazardous decomposition products:**
Hazardous decomposition products of this material are only expected to form under conditions where product is exposed to extreme heat as would occur when incinerated in a fire.

* 11 Toxicological information

· **Information on toxicological effects**
The table below is for classification only and does not pertain to the specific levels found in this product.

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
7778-77-0 Potassium Phosphate		
Dermal	LD50	>4640 mg/kg (rabbit)
6484-52-2 Ammonium Nitrate		
Oral	LD50	2217 mg/kg (rat)
7487-88-9 Magnesium Sulphate		
Oral	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	>2000 mg/l (rabbit)
	LC50/96 hours	2820 mg/l (Pimephales)
10124-37-5 Calcium Nitrate		
Oral	LD50	3900 mg/kg mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** No irritating effect.
· **on the eye:** No irritating effect.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients are listed.
· **NTP (National Toxicology Program)**
None of the ingredients are listed.
· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients are listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
7487-88-9 Magnesium Sulphate	
EC50	2700 mg/l (Green algae)
	343.56 mg/l (Water flea)

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Trade name: Liquid Plant Food (Nutrients)

· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Not known to be hazardous to water.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Recycle or dispose with household trash.
Dispose of material in accordance with federal, state and local requirements.

· **Uncleaned packagings:**
· **Recommendation:**
Dispose of as unused product.
Disposal must be made according to official regulations.

* 14 Transport information

· **UN-Number**
· **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
· **UN proper shipping name**
· **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**
· **Class** Non-Regulated Material
· **Packing group**
· **DOT, ADR, IMDG, IATA** Non-Regulated Material
· **Environmental hazards:** Not applicable.
· **Special precautions for user** Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
· **UN "Model Regulation":** -

* 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**	
None of the ingredients are listed.	
· **Section 313 (Specific toxic chemical listings):**	
7757-79-1	Potassium Nitrate
6484-52-2	Ammonium Nitrate
10124-37-5	Calcium Nitrate
10034-96-5	Manganese(II) Sulfate Monohydrate

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· **TSCA (Toxic Substances Control Act):**	
7757-79-1	Potassium Nitrate
7778-77-0	Potassium Phosphate
6484-52-2	Ammonium Nitrate
7487-88-9	Magnesium Sulphate
10124-37-5	Calcium Nitrate
7732-18-5	water, distilled, conductivity or of similar purity

· **California Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**		
10043-35-3	Boric Acid	I (oral)
10034-96-5	Manganese(II) Sulfate Monohydrate	D
7733-02-0	Zinc Sulphate (anhydrous)	D, I, II

· **TLV (Threshold Limit Value established by ACGIH)**		
10043-35-3	Boric Acid	A4
7782-91-4	Molybdic Acid	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients are listed.

· **GHS label elements** Non-Regulated Material
· **Hazard pictograms** Non-Regulated Material
· **Signal word** Non-Regulated Material
· **Hazard statements** Non-Regulated Material

· **National regulations:**
The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· **State Right to Know**

CAS: 7732-18-5 RTECS: ZC 0110000	water, distilled, conductivity or of similar purity	60-90%
CAS: 7757-79-1 RTECS: TT 3700000	Potassium Nitrate Ox. Sol. 2, H272	5-10%
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CAS: 10124-37-5	Calcium Nitrate Ox. Sol. 2, H272; Eye Irrit. 2A, H319	5-10%
CAS: 7778-77-0	Potassium Phosphate	5-10%
All ingredients are listed.		

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision** 05/21/2015 / -

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Ox. Sol. 2: Oxidising Solids, Hazard Category 2
Ox. Sol. 3: Oxidising Solids, Hazard Category 3
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· ***Data compared to the previous version altered.***

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