



SAFETY DATA SHEET

**Granular Fertilizer – All Analysis
with Surge®**

EMERGENCY NUMBER (INFOTRAC): 1-800- 535-5053

MARION AG SERVICE, INC.

SAINT PAUL, OREGON 97137

Version 1.0 | Effective Date: March 01, 2018

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: St Paul Brand Granular Fertilizer All Analyses with Surge® Broadleaf Herbicide

Chemical Name: EH-1413 Herbicide

Product code: EPA Registration No: 2217-882-69759-OR-002

Synonyms: Granular Fertilizer with Herbicide; Surge® Broadleaf Herbicide

Other means of identification: Granular dry fertilizers including all chemical, partially sulfur coated, 100% polymer or sulfur coated nutrients, with and without micronutrients with Surge®.

1.2. Intended Use of the Product

Use of the substance/mixture: Herbicide & Fertilizer for use by Landscape Professionals.

1.3. Name, Address, and Telephone of the Responsible Party Company

Marion Ag Service Inc.

7749 St Paul Hwy

Saint Paul, OR 97137

1.4. Emergency Telephone Number Emergency Number: 1-800-535-5053

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call INFOTRAC Day or Night

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302

Skin Irrit. 2 H315

Eye Irrit: 2A H319

Skin Sens. 1 H317

STOT SE 3 H335

Aquatic Acute 2 H401

Aquatic Chronic 3 H412

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Warning



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Hazard Statements (GHS-US)

H302 – Harmful if swallowed
H315 – Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H401 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash hands thoroughly after handling
P270 – Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing should not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear eye protection, protective gloves, protective clothing, face protection
P301+P312 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER/doctor/physician if you feel unwell
P321 - Specific treatment (see Section 4)
P330 – If swallowed, rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container according to local, regional, national, and international regulations

2.3. Other Hazards

Hazards not otherwise classified (HNOC): FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565
Take container, label or product name with you when seeking medical attention.

KEEP OUT OF REACH OF CHILDREN

Appearance and odor: Multi-colored granules with slight odor.



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WARNING

Potential Health effects

Routes of exposure	Eye contact, skin contact, inhalation. Avoid breathing dusts.
Eyes	No data available.
Skin	Harmful in contact with skin.
Inhalation	May be harmful if inhaled.
Ingestion	May be harmful if swallowed.

Target organs Skin, Eyes, Inhalation.

Signs and symptoms Harmful if absorbed through skin.

Potential environmental effects This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effect on the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Urea	(CAS No) 57-13-6	0.1 - 98	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
Diammonium phosphate	(CAS No) 7783-28-0	0.1 - 95	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335 Aquatic Acute 3, H402
Potassium chloride	(CAS No) 7447-40-7	0.1 - 95	Aquatic Acute 3, H402
Monoammonium phosphate	(CAS No) 7722-76-1	0.1 - 95	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Ammonium sulfate	(CAS No) 7783-20-2	0.1 - 95	Aquatic Acute 2, H401
Limestone	(CAS No) 1317-65-3	0.1 - 95	Not classified
Sulfur	(CAS No) 7704-34-9	0.1 - 20	Comb. Dust, H232 Flam. Sol. 2, H228 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Aquatic Acute 3, H402
Iron oxide (Fe2O3)	(CAS No) 1309-37-1	0.1 - 10	Not classified



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Saccharated Iron Oxide	(CAS No) 8047-67-4	0.1-10	Not classified
Urea, polymer with formaldehyde	(CAS No) 9011-05-6	0.1 - 10	Not classified
Magnesium sulfate	(CAS No) 7487-88-9	0.1 - 10	Skin Sens. 1, H317
Ferrous sulfate	(CAS No) 7720-78-7	0.1 - 10	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400
Manganese oxide (Mn3O4)	(CAS No) 1317-35-7	0.1 - 10	Not classified
Manganese Sulfate	(CAS No) 7439-96-5	0.1-5	Not classified
Sulfate of Potash-Magnesia	(CAS No) 14977-37-8	0.1 - 10	Not classified
Ammonium Nitrate	(CAS No) 6484-52-2	0.1 – 50	Ox. Sol.3 H272 Eye Irrit. 2A H319
Bentonite	(CAS No) 1302-78-9	0.1-50	Not classified
Sodium chloride	(CAS No) 7647-14-5	0.1-5	Not classified
Potassium Sulfate, SOP, Sulfate of Potash	(CAS No) 7778-80-5	0.1-50	Not classified
Carbonic acid, magnesium salt (1:1), mixture with magnesium hydroxide (Mg(OH)2), hydrate	(CAS No) 39409-82-0	0.1-10	Not classified
Digested Sewage Sludge (Class A Biosolids)	(CAS No) NA	0.1-50	Not classified
2,4-D, 2-ethylhexyl ester	(CAS No) 1928-43-4	0.1-5	Not classified
3,6-Dichloro-o-anisic acid (Dicamba)	(CAS No) 1918-00-9	0.1-5	Not classified
Sulfentrazone	(CAS No) 122836-35-5	0.1-5	Not classified
R(+)(2-methy-4-chlorophenoxy)propionic acid (MCPP)	(CAS No) 16484-77-8	0.1-5	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: If medical advice is needed, have product container or label at hand. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show label where possible).

First-aid Measures After Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.



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First-aid Measures After Skin Contact: Wash skin thoroughly with mild soap and water. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

First-aid Measures After Eye Contact: Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. Call a POISON CENTER/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Harmful if swallowed. Eye irritation. Causes skin irritation. May cause an allergic reaction in sensitive individuals. May cause respiratory irritation.

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system and mucous membranes. May cause cancer by inhalation. May cause drowsiness or dizziness.

Symptoms/Injuries After Skin Contact: May cause skin irritation or an allergic skin reaction.

Symptoms/Injuries After Eye Contact: May cause serious eye irritation.

Symptoms/Injuries After Ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: May cause cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide, water spray, fog. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use water jet. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but will burn at high temperatures. Decomposes above 132 °C (270 °F). Under conditions of fire this material may produce: Ammonia. Nitrogen oxides. Biuret.

Explosion Hazard: May form explosive compounds if mixed with: Calcium hypochlorite. Sodium hypochlorite. Nitrates. Nitric acid. Per chloric acid. Product itself is not explosive but if dust is generated, dust clouds suspended in air can be explosive.

Reactivity: This product as shipped in the form of coarse granules should not contain sufficient dust to present an explosion hazard. Prevent dust accumulation (to minimize explosion hazard).

5.3. Advice for Firefighters

Firefighting Instructions: Not flammable. Exercise caution when fighting any chemical fire.

Protection During Firefighting: Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Other information: Do not allow run-off from firefighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. This material becomes slippery when wet. Avoid all eyes and skin contact and do not breathe vapor and mist. So not allow product to spread into the environment



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6.1.1. For Non-emergency Personnel

Protective Equipment: Wear suitable protective clothing, gloves and eye/face protection. Use appropriate personal protection equipment (PPE)

Emergency Procedures: Collect as any solid. Ventilate area. Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Wear suitable protective clothing, gloves and eye/face protection. Equip cleanup crew with proper protection. Use appropriate personal equipment (PPE)

Emergency Procedures: If possible, stop flow of product. Contain and collect as any solid. Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental Precautions

Avoid release to the environment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.

Methods for Cleaning Up: Recover the product by vacuuming, shoveling or sweeping. Avoid generation of dust during clean-up of spills. If spilled directly onto the ground, remove sufficient soil to ensure material is fully recovered. Material may be used if uncontaminated. Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections: No additional information available.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: This material becomes slippery when wet.

Precautions for Safe Handling: Handle in accordance with good industrial hygiene and safety procedures. Wear recommended personal protective equipment. Avoid creating or spreading dust. Obtain special instruction before use. Do not handle until all safety precaution have been read and understood. Avoid breathing dust/ fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep container closed when not in use.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers.

Prohibitions on mixed storage: Store away from: Ammonium nitrate. Refer to Section 10 on Incompatible Materials.

Special Rules on Packaging: Corrosive to copper and its alloys.

7.3. Specific End Use(s) Fertilizer with herbicide for use by Landscape Professionals.



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Limestone (1317-65-3)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
Iron oxide (Fe ₂ O ₃) (1309-37-1)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA IDLH	US IDLH (mg/m ³)	2500 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
Manganese (7439-96-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	3mg/m ³
USA IDLH	US IDLH (mg/m ³)	500 mg/m ³
USA OSHA	OSHA PEL (ceiling) (mg/m ³)	5 mg/m ³
Magnesium oxide (MgO) (1309-48-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA IDLH	US IDLH (mg/m ³)	750 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³
2,4-D, 2-ethylhexyl ester (1928-43-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA NIOSH	US IDLH TWA (mg/m ³)	100 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³

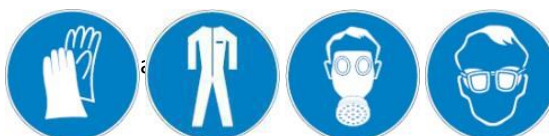
8.2. Exposure Controls

Appropriate Engineering Controls

: Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.
For particulates and dust: Safety glasses.





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Materials for Protective Clothing	: Chemically resistant materials and fabrics.
Hand Protection	: Protective gloves.
Eye Protection	: Chemical goggles or Safety glasses.
Skin and Body Protection	: Wear suitable protective clothing.
Respiratory Protection	: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.
Environmental Exposure Controls	: Ensure adequate ventilation, especially in confined areas.
Other Information	: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Granules. Multi-colored.
Odor	: Ammonia. Slight sulfurous
Odor Threshold	: No data available
pH	: No data available
pH solution	: 10 %
Relative Evaporation Rate (butylacetate=1)	: No data available
Melting Point	: 133°C (271.4°F) Urea
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Density	: 45 (45 - 65) lb/ft ³
Solubility	: Water: Moderately
Partition coefficient: n-octanol/water	: No data available
Viscosity	: No data available

9.2. Other Information No additional information available



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SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:** This product as shipped in the form of coarse granules should not contain sufficient dust to present an explosion hazard. Prevent dust accumulation (to minimize explosion hazard).
- 10.2 Chemical Stability:** Stable at standard temperature and pressure.
- 10.3 Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4 Conditions to Avoid:** Protect from moisture. Keep away from heat.
- 10.5 Incompatible Materials:** May form explosive mixture if in contact with strong acid such as nitric or perchloric acids. Avoid contact with: Strong oxidizers. Strong acids, bases. Nitrates. Hypochlorites. Perchlorates. Chlorides. Corrosive to copper and its alloys.
- 10.6 Hazardous Decomposition Products:** Under conditions of fire this material may produce: Nitrogen oxides. Ammonia. Biuret. Carbon oxides (CO, CO₂). Formaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Harmful if swallowed

Potassium Sulfate, SOP, Sulfate of Potash (7778-80-5)	
LD50 Oral Rat	6600 mg/kg
ATE (Oral)	6,600.00 mg/kg body weight
Diammonium phosphate (7783-28-0)	
LD50 Oral Rat	6500 mg/kg
LD50 Dermal Rabbit	> 7950 mg/kg
ATE (Oral)	6,500.00 mg/kg body weight
Potassium chloride (7447-40-7)	
LD50 Oral Rat	2600 mg/kg
ATE (Oral)	2,600.00 mg/kg body weight
Monoammonium phosphate (7722-76-1)	
LD50 Oral Rat	5750 mg/kg
LD50 Dermal Rabbit	> 7940 mg/kg
ATE (Oral)	5,750.00 mg/kg body weight
Ammonium sulfate (7783-20-2)	
LD50 Oral Rat	> 2000 mg/kg
Sulfur (7704-34-9)	
LD50 Oral Rat	> 3000 mg/kg



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LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	> 9.23 mg/l/4h
Iron oxide (Fe2O3) (1309-37-1)	
LD50 Oral Rat	> 10000 mg/kg
Urea, polymer with formaldehyde (9011-05-6)	
LC50 Inhalation Rat	> 167 mg/m ³ (Exposure time: 4 h)
Urea (57-13-6)	
ATE (Oral)	8471.000 mg/kg
Ferrous sulfate (7720-78-7)	
LD50 Oral Rat	237 mg/kg
ATE (Oral)	237.00 mg/kg body weight
Sodium chloride (7647-14-5)	
LD50 Oral Rat	3 g/kg
LC50 Inhalation Rat	> 42 g/m ³ (Exposure time:1h)
Ammonium Nitrate (6484-52-2)	
LD50 Oral Rat	2217 mg/kg
LC50 Inhalation Rat	>88.8 mg/l/4h
Bentonite (1302-78-9)	
LD50 Oral Rat	> 5000 mg/kg
Manganese (7439-96-5)	
ATE Oral Rat	9000.00 mg/kg body weight
Surge®	
LD50 Oral Rat	550mg/kg Rat-female
LD50 Dermal Rat	>5,000 mg/kg (rat)
LC50 Inhalation Rat	2.05 mg/L (rat)

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified.

Carcinogenicity: These products do contain some carcinogens or potential carcinogens as listed by OSHA.

2,4-D, 2-ethylhexyl ester (1928-43-4) and R(+)(2 methyl-4-chlorophenoxy)propionic acid (MCPP) (16484-77-8)



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Carcinogenicity: Not classified.

Iron oxide (Fe₂O₃) (1309-37-1)	
IRAC group	3
Saccharated Iron oxide (8047-67-4)	
IRAC group	3

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Potential Adverse Human Health Effects and Symptoms: Harmful if swallowed.

Symptoms/Injuries After Inhalation: Irritating to the respiratory system and mucous membranes. May cause cancer by inhalation. May cause drowsiness or dizziness.

Symptoms/Injuries After Skin Contact: Cause skin irritation. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: May cause serious eye irritation.

Symptoms/Injuries After Ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology – General: Harmful to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. This product has low solubility in water. At the limits of Solubility, this product is not toxic to fish. However, at concentrations above the levels of solubility it may be toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.

Potassium Sulfate, SOP, Sulfate of Potash (7778-80-5)	
LC50 Fish 1	653 mg/l (Exposure time: 96 h – Species: Lepomis macrochirus)
EC50 Daphnia 1	890 mg/l (Exposure time: 48 h – Species: Daphnia magna)
EC50 Other Aquatic Organisms 1	2900 mg/l (Exposure time: 72h – Species: Desmodesmus subspicatus)
LC 50 Fish 2	3550 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
Diammonium phosphate (7783-28-0)	
LC50 Fish 1	26.5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
LC 50 Fish 2	24.8 - 29.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Potassium chloride (7447-40-7)	
LC50 Fish 1	1060 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	825 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	750 - 1020 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])



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EC50 Daphnia 2	83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Ammonium sulfate (7783-20-2)	
LC50 Fish 1	5.2 (5.2 - 8.2) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	32.2 (32.2 - 41.9) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Sulfur (7704-34-9)	
LC50 Fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC 50 Fish 2	14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
Magnesium sulfate (7487-88-9)	
LC50 Fish 1	2610 - 3080 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	266.4 – 417.3 mg/l (Exposure time: 48 h – Species: Daphnia magna [Static])
Ferrous sulfate (7720-78-7)	
LC50 Fish 1	925 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [static])
EC50 Daphnia 1	152 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	0.56 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 2	6.15 - 9.26 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Urea (57-13-6)	
LC50 Fish 1	16200 - 18300 mg/l (Exposure time: 96 h - Species: Poecilia reticulata)
EC50 Daphnia 1	3910 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Bentonite (1302-78-9)	
LC50 Fish 1	19000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
Sodium chloride (7647-14-5)	
LC50 Fish 1	5560 (5560-6080) mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	340.7 (340.7-469.2) mg/l (Exposure time: 48h – Species: Daphnia magna [static])



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12.2. Persistence and Degradability

Granular Fertilizer – All Analyses with Surge®	
Persistence and Degradability	May cause long-term adverse effects in the environment. This product is water soluble and eventually biodegrades into elemental nitrogen. Excess nitrogen and nitrates in a body of water will contribute to eutrophication with visible effects such as toxic algae bloom.

12.3. Bioaccumulative Potential

Diammonium phosphate (7783-28-0)	
BCF fish 1	(no bioaccumulation expected)
Monoammonium phosphate (7722-76-1)	
BCF fish 1	(no bioaccumulation expected)
Ammonium sulfate (7783-20-2)	
Log Pow	-5.1 (at 25 °C)
Urea (57-13-6)	
BCF fish 1	< 10
Log Pow	-1.59 (at 25 °C)
Sodium chloride (7647-14-5)	
BCF fish 1	(no bioaccumulation)
Ammonium Nitrate (6484-52-2)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	-3.1 (at 25 °C)

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects: Avoid release into the environment

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal Recommendations: Pesticide: Wastes resulting from the use of this product that cannot be used or chemically reprocesses should be disposed of in a landfill approved for pesticide disposal or on accordance with applicable federal, State or local procedures. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance and applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.



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SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT Not regulated for transport

14.2 In Accordance with IMDG Not regulated for transport

14.3 In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Granular Fertilizer – All Analyses with Surge®	
EPA TSCA Regulatory Flag	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 (SDS), and for workplace labels of non-pesticide chemicals.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
Potassium Sulfate, SOP, Sulfate of Potash (7778-80-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Diammonium phosphate (7783-28-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Potassium chloride (7447-40-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Monoammonium phosphate (7722-76-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Ammonium sulfate (7783-20-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Limestone (1317-65-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sulfur (7704-34-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Iron oxide (Fe₂O₃) (1309-37-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Urea, polymer with formaldehyde (9011-05-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	



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Magnesium sulfate (7487-88-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Ferrous sulfate (7720-78-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Manganese oxide (Mn3O4) (1317-35-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Urea (57-13-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Ammonium nitrate (6484-52-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Bentonite (1302-78-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Magnesium oxide (MgO) (13609-48-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Manganese (7439-96-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (specific toxic chemical listing)
SARA Section 313 – Emission Reporting

15.2 US State Regulations

Reportable Quantity (RQ) under U.S. CERCLA: 2,4-D (CAS:1928-43-4) 100lb. : Dicamba (CAS:1918-00-9) 1000lb.
SARA, title III, Section 313: 2,4-D (CAS:1928-43-4) 0.1%:Dicamba (CAS:1918-00-9)1.0%
RCRA Waste Code: D016; U240

CA Proposition 65: This product contains chemicals known to the State of California to cause cancer or birth defects on other reproductive harm.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date: 11/30/2015

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1



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Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Flam. Sol. 2	Flammable solids Category 2
Ox. Sol. 3	Oxidizing solids Category 3
Ox. Sol. Not classified.	Oxidizing solids not classified
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H228	Flammable solid
H232	May form combustible dust concentrations in air
H272	May intensify fire: oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H320	Causes eye irritation
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

NFPA Health Hazard

: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA Fire Hazard

: 1 - Must be preheated before ignition occurs.

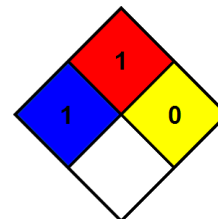
NFPA Reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur





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Flammability : 1 Slight Hazard
Physical : 0 Minimal Hazard

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