# SAFETY DATA SHEET

# 1. Identification

Product identifier	ProfitPoint Foliar Nutrition	n
Other means of identification		
Product code	29001	
Recommended use	Agricultural/ Horticultural Us	se- Micronutrient Fertilizer- Refer to product label.
Recommended restrictions	Refer to product label.	
Manufacturer/Importer/Supplier	Distributor information	
Manufacturer		
Company name	Five Star Cooperative	
Address	P.O. Box 151	
	1949 N. Linn Ave.	
	New Hampton, IA 50659	
	United States	
Telephone	800-334-6958	
E-mail	Not available.	
Emergency phone number	Infotrac	800-535-5053

# 2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Reproductive toxicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility or the unborn child. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If on skin: Wash with plenty of water. 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/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

## 3. Composition/information on ingredients

#### **Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Manganese Sulfate, monohydrate		10034-96-5	10 - < 20*
Urea		57-13-6	5 - < 10*
Zinc Sulfate		7733-02-0	5 - < 10*
Disodium Octaborate Tetrahydrate		12008-41-2	1 - < 3*
Other components below reportable levels			70 - < 80

### 4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

# 5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Should not be released into the environment. Prevent product from entering drains.
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

#### 8. Exposure controls/personal protection

#### **Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value		
Manganese Sulfate, monohydrate (CAS 10034-96-5)	Ceiling	5 mg/m3		
US. ACGIH Threshold Lim Components		Value	Form	
	Туре			
Disodium Octaborate Tetrahydrate (CAS 12008-41-2)	STEL	6 mg/m3	Inhalable fraction.	
	TWA	2 mg/m3	Inhalable fraction.	
Manganese Sulfate, monohydrate (CAS 10034-96-5)	TWA	0.1 mg/m3	Inhalable fraction.	
		0.02 mg/m3	Respirable fraction.	
US. NIOSH: Pocket Guide	to Chemical Hazards			
Components	Туре	Value	Form	
Manganese Sulfate, monohydrate (CAS 10034-96-5)	STEL	3 mg/m3	Fume.	
	TWA	1 mg/m3	Fume.	
US. Workplace Environme	ental Exposure Level (WEEL) Guides			
Components	Туре	Value	Form	
Urea (CAS 57-13-6)	TWA	10 mg/m3	Total particulate.	
logical limit values	No biological exposure limits noted fo	r the ingredient(s).		
propriate engineering htrols	Good general ventilation should be us applicable, use process enclosures, lo maintain airborne levels below recom established, maintain airborne levels shower.	ocal exhaust ventilation, or othe mended exposure limits. If exp	er engineering controls to oosure limits have not been	
-	s, such as personal protective equipme			
Eye/face protection	Chemical respirator with organic vapo	or cartridge and full facepiece.		
Skin protection				
Hand protection	Wear appropriate chemical resistant of	Wear appropriate chemical resistant gloves.		
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.			
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.			
Thermal hazards	Wear appropriate thermal protective of	clothing, when necessary.		
neral hygiene siderations	Observe any medical surveillance req measures, such as washing after han	uirements. Always observe go dling the material and before e	od personal hygiene ating, drinking, and/or	

smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### 9. Physical and chemical properties

9. Physical and chemical	properties
Appearance	Aqueous solution.
Physical state	Liquid.
Form	Liquid.
Color	Light pink.
Odor	Not available.
Odor threshold	Not available.
рН	1.5 - 2.5 (1% Solution)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	1562 °F (850 °C) estimated
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.00001 hPa estimated
Vapor density	Not available.
Relative density	1.23 - 1.29 g/cm3
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.23 - 1.29 g/cm³
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	63.72 % estimated
Pounds per gallon	10.5 (typical)
Shelf life	> 4 years
Specific gravity	1.23 - 1.29
VOC	4.35 % estimated
10. Stability and reactivity	,

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Bases. Reducing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

# 11. Toxicological information

### Information on likely routes of exposure

Information on toxicological effects         Acute toxicity       Not known.         Product       Species       Test Results         ProfitPoint Foliar Nutrition       Acute       Dermal         Dermal       Z3530 mg/kg       Oral         LD50       Rat       2054 mg/kg	Information on likely routes of	exposure	
Eye contact         Causes serious eye damage.           Ingestion         Expected to be a low ingestion hazard.           Symptoms related to the physical characteristics         Severe eye instation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin inritation. May cause redness and pain.           Information on toxicological offsect         Internation.           Product         Species         Test Results           Profiberint Folar Nutrition         Species         Test Results           Domal         23530 mg/kg           LDS0         Rat         20504 mg/kg           Components         Species         Test Results           Dirodu         Species         Test Results           Dirodu         Species         Test Results           Dirodu         Species         Test Results           Dirodu         Rat         2000 mg/kg           Oral         2500 mg/kg         Species           Dornal         2500 mg/kg         Species           Dirodu         Rat         2500 mg/kg           Oral         2500 mg/kg         Species           LDS0         Rat         2500 mg/kg           Oral         2000 mg/kg         Species	Inhalation	Prolonged inhalation may be harmful	
Ingestion         Expected to be a low ingestion hazard.           Symptoms related to the physical, chamical and toxicological characteristics         Symptoms main include stinging, redness, swelling, and blurred vision. Permanent eve damage including blundress out fresult. Skin irritation. May cause redness and pain.           Information on toxicological characteristics         Not known.           Product         Species         Test Results           Product         Species         Test Results           Dormal         Z3530 mg/kg           LD50         Rat         20504 mg/kg           Oral         Expected to 2500 mg/kg           Disod/unc Octaborate Tetrahydrate (CAS 12008-41-2)         Expected Tetrahydrate (CAS 12008-41-2)           Acute Domal         Species         Test Results           Oral         Expected 10044-09-05)         Expected 10044-09-05)           Acute Dermal         Z5500 mg/kg         Commenter 2000 mg/kg           Oral         Expected 10044-09-05)         Expected 10044-09-05)           Acute Oral         Expected 10044-09-05)         Expected 10044-09-05)           Case (CAS 57-13-6)         Expected 10044-09-05)         Expected 10044-09-05)           Acute Oral         Expected 10044-09-05)         Expected 10044-09-05)           Dermal         Expected 10044-09-05)         Expected 10044-09-05) </th <th>Skin contact</th> <th>Causes skin irritation.</th> <th></th>	Skin contact	Causes skin irritation.	
Symptoms related to the physical, chemical and have redness and pain.         Symptoms may include stinging, learing, redness, swelling, and blurred vision. Permanent eye damage including blinness could result. Skin initiation. May cause redness and pain.           Information on toxicological effect vacuus toxicity         Not known.           Product         Species         Test Results           Product         Species         Test Results           Dermal         Just Results         Species         Test Results           Oral         Species         Test Results         Species         Test Results           Oral         Rat         Species         Test Results         Species           Oral         Rat         Species         Test Results         Species           Oral         Rat         Species         Species         Species           Oral         Rat         Species         Species         Species <th>Eye contact</th> <th colspan="2">Causes serious eye damage.</th>	Eye contact	Causes serious eye damage.	
pinyisian, chemical and vision. Permanent eye damage incluiding bilindnesis could result. Skin irritation. May cause redress and pain. Information on toxicological efforts and pain. Information on toxicological e	Ingestion	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause	
Acute toxicity     Not known.       Product     Species     Test Results       ProfitPoint Foliar Nutrition	* -		
Product Poilar Nutrition Profix Foliar Nutrition Acute Common Con Con Con Con Con Con Con Con Con C	Information on toxicological eff	fects	
Acute       Jama Participant Point Po	Acute toxicity	Not known.	
Acute         Jornal           LD50         Rat         23530 mg/kg           Oral         5054 mg/kg           Components         Species         Test Results           Disordum Octaborate Tetrahydrate (CAS 12008-41-2)         Test Results           Disordum Octaborate Tetrahydrate (CAS 12008-41-2)         Test Results           Acute         Species         Test Results           Dermal         2000 mg/kg           Coral         2150 mg/kg           LD50         Rat         2150 mg/kg           Urea (CAS 57-13-6)         Zette         Zette           Oral         E         Zette           LD50         Rat         8471 mg/kg           Zinc Sulfate (CAS 773-02-0)         Zette         Zette           Dermal         Zette         Zette           Dofo         Rat         2000 mg/kg           Dofo         Rat         2000 mg/kg           Coral         Zette         Zette           Dofo         Rat         200 mg/kg           Dofo         Ra	Product	Species	Test Results
Dermal         LD50         Rat         23530 mg/kg           Coral         5054 mg/kg           Components         Species         Test Results           Disodum Octaborate Tetrahydrate (CAS 12008-41-2)             Actite         Dormal         2000 ng/kg           Dormal         > 2000 ng/kg            Dormal         2550 mg/kg            Coral         2550 mg/kg            LD50         Rat         2550 mg/kg           Manganeses Sulfate, monohydrate (CAS 10034-96-5)             Coral         2550 mg/kg            LD50         Rat         2150 mg/kg           Urea (CAS 57:13-6)             Zinc Sulfate (CAS 7733-02-0)         Rat         8471 mg/kg           Zinc Sulfate (CAS 7733-02-0)         Rat         2000 mg/kg           Coral         2000 mg/kg         623 mg/kg           Dofnal         2000 mg/kg         623 mg/kg           Dorel         2000 mg/kg         623	ProfitPoint Foliar Nutrition		
LD50       Rat       23530 mg/kg         Oral       ED50       Rat       5054 mg/kg         Components       Spocies       Test Results         Disodium Octaborate Tetrahydrate : USU88-41-2)       Test Results         Dermal       Spocies       Versite Results         LD50       Rabbit       > 2000 mg/kg         Oral       ED50       Rat       2550 mg/kg         Manganese Sulfate, monohydrate (CAS 10034-96-5)       Xeute       Spocies         Oral       ED50       Rat       2150 mg/kg         LD50       Rat       2150 mg/kg         Urea (CAS 57-13-6)       Xeute       Spocies         Acute       Oral       Rat       2150 mg/kg         Urea (CAS 57-13-6)       Rat       2000 mg/kg         Zinc Sulfate (CAS 7733-02-0)       Xeute       Spocies         Zinc Sulfate (CAS 7733-02-0)       Rat       2000 mg/kg         Diso       Rat       2000 mg/kg         Diso       Rat       2000 mg/kg         Diso       Rat       200 mg/kg         Oral       Stin corrosion/irritation       Sause serious eye damage.         Stin corrosion/irritation       Causes skin irritation.       Soung/kg         Stin sen	Acute		
Oral LD50       Rat       5054 mg/kg         Components       Species       Test Results         Disodrum Octaborate Tetrahydrate (CAS 12008-41-2)       Image: Components       Acute         Dermal       John State Tetrahydrate (CAS 12008-41-2)       Image: Components       Acute         Dermal       John State Tetrahydrate (CAS 1008-41-2)       Image: Components       Acute         Oral       LD50       Rat       2550 mg/kg         Manganeses Sulfate, monohydrate (CAS 10034-96-5)       Image: Components       Image: Components         Oral       LD50       Rat       2150 mg/kg         Urea (CAS 57-13-6)       Image: Components       Image: Components       Image: Components         Oral       Image: Components       Image: Components       Image: Components       Image: Components         LD50       Rat       2150 mg/kg       Image: Components       Image: Components       Image: Components         LD50       Rat       2000 mg/kg       Image: Components       Image: Components       Image: Components         LD50       Rat       2000 mg/kg       Image: Components       Image: Components       Image: Components         LD50       Rat       2000 mg/kg       Image: Components       Image: Components       Image: Components <td>Dermal</td> <td></td> <td></td>	Dermal		
LD50       Rat       5054 mg/kg         Comoents       Species       Test Results         Disocium Octaborate Tetrahydrat (CAS 12008-41-2)       Image and the second s	LD50	Rat	23530 mg/kg
Components         Species         Test Results           Disodium Octaborate Tetrahydrate (CAS 12008-41-2)         Acute	Oral		
Disodium Octaborate Tetrahydrate (CAS 12008-41-2)           Acute         Dermal           LD50         Rabbit         > 2000 mg/kg           Oral         LD50         Rat         2550 mg/kg           Manganese Sulfate, monohydrate (CAS 10034-96-5)         Acute         Oral         LD50         Rat         2150 mg/kg           Oral         LD50         Rat         2150 mg/kg         Urea (CAS 57-13-6)         Acute         Oral         LD50         Rat         2150 mg/kg           Urea (CAS 57-13-6)         Acute         Oral         LD50         Rat         8471 mg/kg           Zinc Sulfate (CAS 7733-02-0)         Acute         Dermal         Coral         Coral<	LD50	Rat	5054 mg/kg
Acute       Dermal         D50       Rabbit       > 2000 mg/kg         Oral       2550 mg/kg         D50       Rat       2550 mg/kg         Manganeses Sulfate, monohydrate (CAS 10034-96-5)	Components	Species	Test Results
Dermal       > 2000 mg/kg         LD50       Rabit       > 2000 mg/kg         Oral       > 2500 mg/kg         LD50       Rat       > 2500 mg/kg         Manameters Sulfate, monohydrate U034-96-5       > 2500 mg/kg         Manameters Sulfate, monohydrate U034-96-5       > 2500 mg/kg         Manameters Sulfate, monohydrate U034-96-5       > 2150 mg/kg         Manameters Sulfate, monohydrate U034-96-5       > 2150 mg/kg         Oral       2150 mg/kg         LD50       Rat       2150 mg/kg         Oral       2000 mg/kg         LD50       Rat       2000 mg/kg         Damal       Parameters       Parameters         LD50       Rat       2000 mg/kg         D50       Rate serious eye damage.       2000 mg/kg         D50       Rate serious eye damage.       2000 mg/kg         D50       Rate serious eye damage.       2000 mg/kg         D50<	Disodium Octaborate Tetrahydrat	e (CAS 12008-41-2)	
LDS0 Rabit >2000 mg/kg Oral LD50 Rat 2550 mg/kg Mangamese Sulfate, monohydrate (CAS 10034-96-5) Mangamese Sulfate, monohydrate (CAS 10034-96-5) Acute Oral LD50 Rat 2150 mg/kg Urea (CAS 57.13-6) Urea (CAS 57.13-6) Rata 8471 mg/kg Zinc Sulfate (CAS 7733-02-0) LD50 Rat 8471 mg/kg Zinc Sulfate (CAS 7733-02-0) LD50 Rat 2000 mg/kg Oral LD50 Rat 2000 mg/kg Oral LD50 Rat 2000 mg/kg Suin corrosion/irritation Serious eye damage/eye 3200 mg/kg Case serious eye damage. Irritation Respiratory or skin sensitization Respiratory or skin sensitization Respiratory or skin sensitization Respiratory sensitization Meto apartial or complete lack of data the classification is not possible. Germ cell muta genicity U bue to partial or complete lack of data the classification is not possible. Germ cell muta genicity U bue to partial or complete lack of data the classification is not possible. Germ cell muta genicity U bue to partial or complete lack of data the classification is not possible. Germ cell muta genicity U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue to partial or complete lack of data the classification is not possible. Macute U bue Data is not possible. Macute U bue Data is not possible	<u>Acute</u>		
Oral LD50       Rat       2550 mg/kg         Manganese Sulfate, monohydrate (CAS 10034-96-5)	Dermal		
LD50 Rat 250 mg/kg Asound a service with a servic	LD50	Rabbit	> 2000 mg/kg
Marganese Sulfate, monohydrate (CAS 10034-96-5)           Acute	Oral		
Acute Oral LD50       Rat       2150 mg/kg         Urea (CAS 57-13-6)	LD50	Rat	2550 mg/kg
Oral       2150 mg/kg         LD50       Rat       2150 mg/kg         Urea (CAS 57-13-6)       Acute       8471 mg/kg         Oral       8471 mg/kg       1000 mg/kg         LD50       Rat       8471 mg/kg         Zinc Sulfate (CAS 7733-02-0)       Permal       2000 mg/kg         Dermal       > 2000 mg/kg       623 mg/kg         LD50       Rat       920 mg/kg         D50       Rat       920 mg/kg         Rat       920 mg/kg       920 mg/kg	Manganese Sulfate, monohydrate	e (CAS 10034-96-5)	
LD50       Rat       2150 mg/kg         Ucea (CAS 57-13-6)       Acute       Acute         Oral       Acute       8471 mg/kg         D50       Rat       8471 mg/kg         Zinc Sulfate (CAS 7733-02-0)       Parmal       Parmal         Dermal       2000 mg/kg       Parmal         LD50       Rat       920 mg/kg         Oral       2000 mg/kg       Parmal         LD50       Rat       920 mg/kg         Oral       230 mg/kg       Parmal         LD50       Rat       920 mg/kg         D50       Rat       920 mg/kg         Stin corroson/irritation       Causes skin irritation.         Stin corroson/irritation       Cause skin irritation.         Respiratory or skin sensitization       Cause skin irritation.         Respiratory sensitization       Cause skin irritation.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Ide to partial or complete lack of data the classification is not possible.       Due to partial or complete lack of data	<u>Acute</u>		
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Acute       Nation       8471 mg/kg         Doroal       8471 mg/kg         LD50       Ration       8471 mg/kg         Zinc Sulface (CAS 7733-02-0)       Permail       Permail         Dermal       2000 mg/kg         Doroal       Pathon       Pathon         LD50       Ration       920 mg/kg         Oral       Pathon       Pathon         LD50       Ration       920 mg/kg         Stin corrosion/irritation       Causes skin irritation.         Serious eye damage/eye irritation.       Causes serious eye damage.         Respiratory or skin sensitization       Cause serious eye damage.         Respiratory or skin sensitization       Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Garcinogenicity       Due to partial or complete lack of data the classification is not possible.         Idate Unsupervision       Due to partial or complete lack of data the classification is not possible.         Idate Unsupervision       Due to partial or complete lack of data the classification is not possible.         Idate Unsupervision       Due to partial or co	LD50	Rat	2150 mg/kg
Oral       Rat       8471 mg/kg         LD50       Rat       8471 mg/kg         Zinc Sulface (CAS 7733-02-0)       Image: CAS 7733-02-0)         Acute       Demail       Image: CAS 7733-02-0)         Dermal       Value       Value         LD50       Rat       > 2000 mg/kg         Oral       Stin Component       Stin Second Se	Urea (CAS 57-13-6)		
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Zinc Sulfate (CAS 7733-02-0) Acute Dermal LD50 Rat Cal	Oral		
Acute         Dermal         LD50       Rat       > 2000 mg/kg         Oral           LD50       Rat       920 mg/kg         D50       Rat       920 mg/kg         Causes skin irritation.       623 mg/kg         Serious eye damage/eye       Causes skin irritation.         Serious eye damage/eye       Causes serious eye damage.         irritation       Causes serious eye damage.         Respiratory or skin sensitization       Cause to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Monographs. Overall Evitation of Carcinogenicity       Intertion of Carcinogenicity	LD50	Rat	8471 mg/kg
Dermal       > 2000 mg/kg         LD50       Rat       > 200 mg/kg         Oral       > 200 mg/kg         LD50       Rat       920 mg/kg         623 mg/kg           Skin corrosion/irritation       Causes skin irritation.          Serious eve damage/eve irritation       Causes skin isritation.          Respiratory or skin sensitization       Causes serious eve damage.          Respiratory sensitization       Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Wondergarbs. Overality Evertication complete lack of data the classification is not possible.	Zinc Sulfate (CAS 7733-02-0)		
LD50       Rat       > 2000 mg/kg         Oral       920 mg/kg         LD50       Rat       920 mg/kg         623 mg/kg       623 mg/kg         Skin corrosion/irritation       Causes skin irritation.         Serious eye damage/eye       Causes serious eye damage.         irritation       Causes serious eye damage.         Respiratory or skin sensitization       Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogen cell       Due to partial or complete lack of data the classification is not possible.         IAR Unorgraphs. Overall Evistrion of Carcinogenicity       Due to partial or complete lack of data the classification is not possible.	<u>Acute</u>		
Oral       920 mg/kg         LD50       Rat       920 mg/kg         623 mg/kg       623 mg/kg         Skin corrosion/irritation       Causes skin irritation.         Serious eye damage/eye       Causes serious eye damage.         irritation       Causes serious eye damage.         Respiratory or skin sensitization       Cue to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Monographs. Overall Evultion of Carcinogenicity       Lue to partial or complete lack of data the classification is not possible.	Dermal		
LD50 Rat 920 mg/kg 623 mg/kg Skin corrosion/irritation Causes skin irritation. Serious eye damage/eye Causes serious eye damage. Serious eye damage/eye Causes eye damage. Serious eye damage/eye Causes eye damage. Serious eye damage/eye Causes eye damage. Serious eye damage/eye eye damage. Serious eye damage/eye eye damage. Serious eye damage/eye eye damage. Serious eye damage/eye eye damage. Serious eye damage. Serious eye damage/eye eye damage. Serious eye damage/eye eye damage. Serious eye damag	LD50	Rat	> 2000 mg/kg
623 mg/kg         Skin corrosion/irritation       Causes skin irritation.         Serious eye damage/eye       Causes serious eye damage.         irritation       Causes serious eye damage.         Respiratory or skin sensitization       Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Monographs. Overall Evaluation of Carcinogenicity       Set of Carcinogenicity	Oral		
Skin corrosion/irritationCauses skin irritation.Serious eye damage/eye irritationCauses serious eye damage.Respiratory or skin sensitization Respiratory sensitizationDue to partial or complete lack of data the classification is not possible.Built to partial or complete lack of data the classification is not possible.Due to partial or complete lack of data the classification is not possible.Germ cell mutagenicity IARC Monographs. Overall Evaluation of CarcinogenicityDue to partial or complete lack of data the classification is not possible.	LD50	Rat	920 mg/kg
Serious eye damage/eye irritationCauses serious eye damage.Respiratory or skin sensitization Respiratory sensitization Skin sensitizationDue to partial or complete lack of data the classification is not possible.Germ cell mutagenicityDue to partial or complete lack of data the classification is not possible.CarcinogenicityDue to partial or complete lack of data the classification is not possible.IARC Monographs. Overall Evaluation of CarcinogenicityDue to partial or complete lack of data the classification is not possible.			623 mg/kg
irritation         Respiratory or skin sensitization         Respiratory sensitization         Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Monographs. Overall Evaluation of Carcinogenicity	Skin corrosion/irritation	Causes skin irritation.	
irritation         Respiratory or skin sensitization         Respiratory sensitization         Due to partial or complete lack of data the classification is not possible.         Skin sensitization       Due to partial or complete lack of data the classification is not possible.         Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Monographs. Overall Evaluation of Carcinogenicity	Serious eye damage/eye	Causes serious eye damage.	
Respiratory sensitizationDue to partial or complete lack of data the classification is not possible.Skin sensitizationDue to partial or complete lack of data the classification is not possible.Germ cell mutagenicityDue to partial or complete lack of data the classification is not possible.CarcinogenicityDue to partial or complete lack of data the classification is not possible.IARC Monographs. Overall Evaluation of Carcinogenicity			
Skin sensitizationDue to partial or complete lack of data the classification is not possible.Germ cell mutagenicityDue to partial or complete lack of data the classification is not possible.CarcinogenicityDue to partial or complete lack of data the classification is not possible.IARC Monographs. Overall Evaluation of Carcinogenicity	Respiratory or skin sensitizatio	n	
Germ cell mutagenicity       Due to partial or complete lack of data the classification is not possible.         Carcinogenicity       Due to partial or complete lack of data the classification is not possible.         IARC Monographs. Overall Evaluation of Carcinogenicity	Respiratory sensitization	Due to partial or complete lack of dat	a the classification is not possible.
Carcinogenicity Due to partial or complete lack of data the classification is not possible. IARC Monographs. Overall Evaluation of Carcinogenicity	Skin sensitization	Due to partial or complete lack of dat	a the classification is not possible.
IARC Monographs. Overall Evaluation of Carcinogenicity	Germ cell mutagenicity	Due to partial or complete lack of dat	a the classification is not possible.
	Carcinogenicity	Due to partial or complete lack of dat	a the classification is not possible.
Not listed.	IARC Monographs. Overall	Evaluation of Carcinogenicity	
	Not listed.		

OSHA Specifically Regulate Not listed.	d Substances (29 CFR 1910.1001-1053)
US. National Toxicology Pro	ogram (NTP) Report on Carcinogens
Not listed. Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Chronic effects	Prolonged inhalation may be harmful.

# 12. Ecological information

Ecotoxicity

Harmful to aquatic life with long lasting effects. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Product		Species	Test Results
ProfitPoint Foliar Nutrition			
Aquatic			
Crustacea	EC50	Daphnia	72.8682 mg/l, 48 hours estimated
Fish	LC50	Fish	130.6685 mg/l, 96 hours estimated
Components		Species	Test Results
Disodium Octaborate Tetrah	ydrate (CAS 12	008-41-2)	
Aquatic			
Acute			
Crustacea	LC50	Daphnia magna	619 mg/l
Fish	LC50	Pimephales promelas	370 mg/l
Manganese Sulfate, monohy	drate (CAS 100	034-96-5)	
Aquatic			
Crustacea	EC50	Water flea (Daphnia obtusa)	30.8 - 44.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	36.9 mg/l, 96 hours
			29.7 - 52.7 mg/l, 192 hours
Urea (CAS 57-13-6)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	3910 mg/l, 48 hours
Fish	LC50	Carp (Leuciscus idus melanotus)	> 10000 mg/l, 48 hours
		Guppy (Poecilia reticulata)	16200 - 18300 mg/l, 96 hours
		Harlequinfish, red rasbora (Rasbora heteromorpha)	12000 mg/l, 96 hours
		Mozambique tilapia (Tilapia mossambica)	590 - 730 mg/l, 96 hours
Zinc Sulfate (CAS 7733-02-0	))		
Aquatic			
Algae	LC50	Green algae (Chlorella vulgaris)	5 mg/l, 24 hours
Crustacea	EC50	Amphipod (Crangonyx pseudogracilis)	15.1 - 24.5 mg/l, 96 hours
		Rotifer (Philodina acuticornis)	0.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	10.62 - 11.3 mg/l, 5 days
			0.168 - 0.25 mg/l, 96 hours
		Fish (Lepidocephalichthyes guntea)	76 - 118.8 mg/l, 24 hours
istones and demodebility.		veilable on the degradability of any ingradier	•

Persistence and degradability Bioaccumulative potential No data is available on the degradability of any ingredients in the mixture.

Partition coefficient n-octanol / water (log Kow)		
Urea	-2.11	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
13. Disposal consideration	ns	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.	
Local disposal regulations	Dispose in accordance with all applicable regulations.	
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	

### 14. Transport information

DO	т

UN number	UN3082
UN proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Zinc Sulfate RQ = 11765 LBS)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	8, 146, 335, IB3, T4, TP1, TP29
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241
Not DOT regulated in democratic	(LICA ground) transportation in postage sizes less then 11 7CE lbs (1.110 gellens); E. 20

Not DOT regulated in domestic (USA ground) transportation in package sizes less than 11,765 lbs (1,119 gallons); 5,336 kg (4,235 liters). The DOT transportation information above is for shipments with package sizes equal to or exceeding this value.

DOT Shipping Notes: 40 CFR 172.504(f)(9) For Class 9, a CLASS 9 placard is not required for domestic (USA ground) transportation, however shipments with packaging exceeding the Reportable Quantity (RQ) or bulk packaging must be marked with the appropriate identification number on a CLASS 9 placard, an orange panel, or a white square-on-point display configuration as required. Since the Class 9 placard is not required (although it may be used) the hazardous material endorsement is also not required on a Commercial Drivers License.

DOT corrosive to aluminum. Not regulated if transported by road or rail in packaging that will not react dangerously or be degraded by this material [49 CFR Sec.173.154(d)]

#### IATA

UN number UN proper shipping name Transport hazard class(es)	UN3264 Corrosive liquid, acidic, inorganic, n.o.s. (Mineral Acid)
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	No
Special precautions for userOther information:Passenger aircraft:5LCargo aircraft only:60 L	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN proper shipping name Transport hazard class(es)	UN3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Mineral Acid)
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No
EmS	F-A, S-B
Special procautions for user	Read safety instructions SDS and emergency procedures before handl

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

DOT



IATA; IMDG



**General information** 

**US federal regulations** 

Not DOT regulated in domestic (USA ground) transportation in package sizes less than 11,765 lbs (1,119 gallons); 5,336 kg (4,235 liters). The DOT transportation information above is for shipments with package sizes equal to or exceeding this value.

### 15. Regulatory information

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### Toxic Substances Control Act (TSCA)

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Manganese Sulfate, mon Zinc Sulfate (CAS 7733-0 SARA 304 Emergency relea:		Listed. Listed.
Not regulated.		
6	d Substances (29 CFR 1910.10	001-1053)
Not listed.		
Superfund Amendments and Re	authorization Act of 1986 (SA	RA)
SARA 302 Extremely hazard	lous substance	
Not listed.		
SARA 311/312 Hazardous chemical	No (Exempt)	

Chemical name	CAS number	% by wt.
Manganese Sulfate, monohydrate	10034-96-5	10 - < 20
Zinc Sulfate	7733-02-0	5 - < 10
federal regulations		
a Air Act (CAA) Section 112 Hazardous	Air Pollutants (HAPs) List	

Manganese Sulfate, monohydrate (CAS 10034-96-5)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

#### US state regulations

#### **California Proposition 65**

WARNING: This product can expose you to chemicals including arsenic, cadmium, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Disodium Octaborate Tetrahydrate (CAS 12008-41-2)

#### **International Inventories**

Country(s) or region	Inventory name On i	nventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
*A "Vaa" indicates that all some	ponto of this product comply with the inventory requirements administered by the asverning	$a_{\alpha}$

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

Issue date Version #	02-15-2021 01
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of Manufacturer's knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the Product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights of others. The information provided in this Safety Data Sheet relates only to the specific Product designated and may not be valid if the Product is used in combination with other materials or in any other process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its owns tests of the Product to determine suitability of the Product for user's particular use.
Revision information	Product and Company Identification: Alternate Trade Names