

Safety Data Sheet



Section 1: Identification

Product identifier

Product Name • Platform

Relevant identified uses of the substance or mixture and uses advised against

Recommended use • Foliar fertilizer

Details of the supplier of the safety data sheet

Manufacturer • Source to Source, supported by Vanguard Ag
3233 South "I" Street
Tulare, CA 93274
United States

Telephone (General) • 559-686-4425

Telephone (General) • 866-727-4572 - Toll Free

Emergency telephone number

Manufacturer • 1-800-424-9300 - CHEMTREC - U.S. Canada, Puerto Rico - 24 Hrs.

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 • Skin Irritation 2
Eye Irritation 2

Label elements

OSHA HCS 2012

WARNING



Hazard statements • Causes skin irritation
Causes serious eye irritation

Precautionary statements

Prevention • Wash thoroughly after handling.
Wear protective gloves and eye/face protection.

- Response**
- If on skin: Wash with plenty of water.
Take off contaminated clothing and wash before reuse.
Specific treatment, see supplemental first aid information.
If skin irritation occurs: Get medical advice/attention.
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - If eye irritation persists: Get medical advice/attention.

Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Urea	CAS:57-13-6	0% TO 46.74%	Ingestion/Oral-Rat LD50 • 8471 mg/kg	OSHA HCS 2012: Skin Irrit. 2	NDA
1,3,5-triazinan-2-one	CAS:7098-14-8	0% TO 46.74%	NDA	OSHA HCS 2012: Not Classified	NDA
Natural organic acids	NDA	17%	NDA	OSHA HCS 2012: Not Classified	NDA
Potassium carbonate	CAS:584-08-7	7.17%	Ingestion/Oral-Rat LD50 • 1870 mg/kg	OSHA HCS 2012: Acute Tox. 4 (orl); STOT SE 3: Resp. Irrit.; Skin Irrit. 2; Eye Irrit. 2	NDA
Phosphoric acid	CAS:7664-38-2	4.745% TO 5.84%	Ingestion/Oral-Rat LD50 • 1.25 g/kg Inhalation-Rat LC50 • 25.5 mg/m ³	OSHA HCS 2012: Skin Corr. 1C; Eye Dam. 1; Acute Tox. 4 (orl)	NDA
Molybdcic acid, disodium salt, dihydrate	CAS:10102-40-6	0.12844%	NDA	OSHA HCS 2012: Not Classified	NDA

Section 4: First-Aid Measures

Description of first aid measures

- Inhalation**
- Move victim to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if victim is not breathing.
- Skin**
- If on skin: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.
- Eye**
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

- Suitable Extinguishing Media**
- SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
LARGE FIRE: Water spray, fog or regular foam.

- Unsuitable Extinguishing Media**
- No data available

Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Containers may explode when heated.

- Hazardous Combustion Products**
- No data available

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

- Emergency Procedures**
- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep out of low areas. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering.

Environmental precautions

- Do not contaminate any watercourse or other body of water by direct application, disposal, or cleaning of equipment.

Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Stop leak if you can do it without risk.
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
LARGE SPILLS: Dike far ahead of spill for later disposal.

Section 7 - Handling and Storage

Precautions for safe handling

- Handling**
- Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours, spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for safe storage, including any incompatibilities

- Storage**
- Keep container closed when not in use. Store in a cool, dry, well-ventilated place. Do not store diluted material. This material has a limited shelf life. Do not store from one season to the next.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Phosphoric acid (7664-38-2)	TWAs	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA
	STELs	3 mg/m3 STEL	3 mg/m3 STEL	Not established

Exposure Limits Supplemental

ACGIH

- Phosphoric acid (7664-38-2): **TLV Basis - Critical Effects:** (eye, skin and upper respiratory tract irritation)

Exposure controls

Engineering

Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves.

Environmental

- Follow best practice for site management and disposal of waste.

Exposure Controls

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

MSHA = Mine Safety and Health Administration

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

NIOSH = National Institute of Occupational Safety and Health

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Dark brown liquid with a slightly sweet odor.
Color	Dark brown.	Odor	Slightly sweet.
Odor Threshold	No data available		
General Properties			
Boiling Point	No data available	Melting Point	No data available
Decomposition Temperature	No data available	pH	8.6-8.7
Specific Gravity/Relative Density	= 1.291-1.317	Water Solubility	No data available
Viscosity	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- No data available

Incompatible materials

- No data available

Hazardous decomposition products

- No data available

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Phosphoric acid (4.745% TO 5.84%)	7664-38-2	Acute Toxicity: Ingestion/Oral-Rat LD50 • 1.25 g/kg; <i>Lungs, Thorax, or Respiration:Acute pulmonary edema; Liver:Changes in liver weight</i> ; Inhalation-Rat LC50 • 25.5 mg/m ³ ; <i>Lungs, Thorax, or Respiration:Acute pulmonary edema; Liver:Changes in liver weight</i>
Potassium carbonate (7.17%)	584-08-7	Acute Toxicity: Ingestion/Oral-Rat LD50 • 1870 mg/kg
Urea (0% TO 46.74%)	57-13-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 8471 mg/kg; Irritation: Skin-Human • 20 % 24 Hour(s) • Moderate irritation; Tumorigen / Carcinogen: Ingestion/Oral-Rat TDLo • 821 g/kg 1 Year(s)-Continuous; <i>Tumorigenic:Neoplastic by RTECS criteria; Blood:Tumors; Blood:Lymphoma, including Hodgkin's disease</i>
Molybdic acid, disodium salt, dihydrate (0.12844%)	10102-40-6	Reproductive: Ingestion/Oral-Rat TDLo • 401 mg/kg (6W pre/1-21D preg); <i>Reproductive Effects:Maternal Effects:Menstrual cycle changes or disorders; Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012•No data available
Aspiration Hazard	OSHA HCS 2012•No data available
Carcinogenicity	OSHA HCS 2012•No data available
Germ Cell Mutagenicity	OSHA HCS 2012•No data available
Skin corrosion/Irritation	OSHA HCS 2012•Skin Irritation 2
Skin sensitization	OSHA HCS 2012•No data available
STOT-RE	OSHA HCS 2012•No data available
STOT-SE	OSHA HCS 2012•No data available
Toxicity for Reproduction	OSHA HCS 2012•No data available
Respiratory sensitization	OSHA HCS 2012•No data available
Serious eye damage/Irritation	OSHA HCS 2012•Eye Irritation 2

Potential Health Effects

Inhalation

Acute (Immediate) • May cause slight respiratory irritation.

Chronic (Delayed) • No data available

Skin

Acute (Immediate) • Causes skin irritation.

Chronic (Delayed) • No data available

Eye

Acute (Immediate) • Causes serious eye irritation.

Chronic (Delayed) • No data available

Ingestion

Acute (Immediate) • May cause irritation.

Chronic (Delayed) • No data available

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TD = Toxic Dose

Section 12 - Ecological Information

Toxicity

- Material data lacking.

Persistence and degradability

- Material data lacking.

Bioaccumulative potential

- Material data lacking.

Mobility in Soil

- Material data lacking.

Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA

Special precautions for user

- None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Section 15 - Regulatory Information

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

SARA Hazard Classifications

- Acute

State Right To Know				
Component	CAS	MA	NJ	PA
1,3,5-triazinan-2-one	7098-14-8	No	No	No
Molybdc acid, disodium salt, dihydrate	10102-40-6	No	No	No
Phosphoric acid	7664-38-2	Yes	Yes	Yes
Potassium carbonate	584-08-7	No	No	No
Urea	57-13-6	No	No	No

Inventory		
Component	CAS	TSCA
1,3,5-triazinan-2-one	7098-14-8	Yes
Molybdc acid, disodium salt, dihydrate	10102-40-6	No
Phosphoric acid	7664-38-2	Yes
Potassium carbonate	584-08-7	Yes
Urea	57-13-6	Yes

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

•Potassium carbonate	584-08-7	Not Listed
•Molybdc acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

•Potassium carbonate	584-08-7	Not Listed
•Molybdc acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

•Potassium carbonate	584-08-7	Not Listed
•Molybdc acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

•Potassium carbonate	584-08-7	Not Listed
•Molybdc acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	5000 lb final RQ; 2270 kg final RQ
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

•Potassium carbonate	584-08-7	Not Listed
•Molybdc acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed

•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

•Potassium carbonate	584-08-7	Not Listed
•Molybdic acid, disodium salt, dihydrate	10102-40-6	Not Listed
•Phosphoric acid	7664-38-2	Not Listed
•Urea	57-13-6	Not Listed
•1,3,5-triazinan-2-one	7098-14-8	Not Listed

Section 16 - Other Information

Last Revision Date • 10/8/2018, SDS0455.02

Preparation Date • 03/April/2015

Disclaimer/Statement of Liability • Reasonable care has been taken in the preparation of this information, but the supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

Key to abbreviations

NDA = No Data Available