

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Key Grow Solutions Blue Butterfly (6-3-5)

1.2. Intended Use of the Product

Use of the Substance/Mixture: Agriculture/Specialty crop

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

Company

Nachurs Alpine Solutions

421 Leader St.

Marion, OH 43302

740-382-5701

1.4. Emergency Telephone Number

Emergency Number : CHEMTREC: 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US Classification

Repr. 1B H360

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H360 - May damage fertility or the unborn child (oral).

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves, protective clothing, and eye protection.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P405 - Store locked up.
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Disodium octaborate, tetrahydrate	(CAS-No.) 12280-03-4	Proprietary	Repr. 1B, H360
Water	(CAS-No.) 7732-18-5	Proprietary	Not classified
Urea	(CAS-No.) 57-13-6	Proprietary	Comb. Dust
Protein hydrolyzates, soya	(CAS-No.) 68607-88-5	Proprietary	Comb. Dust
Manganate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dipotassium, (OC-6-21)-	(CAS-No.) 68015-77-0	Proprietary	Not classified

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Ammonium polyphosphate	(CAS-No.) 68333-79-9	Proprietary	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
Zincate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, diammonium, (OC-6-21)-	(CAS-No.) 67859-51-2	Proprietary	Not classified
Dipotassium phosphate	(CAS-No.) 7758-11-4	Proprietary	Not classified
Phosphoric acid, potassium salt (1:1)	(CAS-No.) 7778-77-0	Proprietary	Not classified
Potassium acetate	(CAS-No.) 127-08-2	Proprietary	Not classified
Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, ammonium, (OC-6-21)-	(CAS-No.) 21265-50-9	Proprietary	Eye Irrit. 2A, H319
Cuprate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, diammonium, (OC-6-21)-	(CAS-No.) 67989-88-2	Proprietary	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
D-Glucopyranose, oligomeric, decyl octyl glycosides	(CAS-No.) 68515-73-1	Proprietary	Eye Dam. 1, H318 Aquatic Acute 3, H402
Sodium molybdate dihydrate	(CAS-No.) 10102-40-6	Proprietary	Not classified
Cobalt sulfate	(CAS-No.) 10124-43-3	Proprietary	Acute Tox. 4 (Oral), H302 Eye Irrit. 2B, H320 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Repr. 1B, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: May damage fertility. May damage the unborn child.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May damage fertility or the unborn child (oral).

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. 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 may burn at high temperatures.

Explosion Hazard: Product is not explosive.

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Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). When heated, urea releases ammonia and when heated to decomposition it emits toxic fumes of nitrogen oxides (NO_x), ammonia, and cyanuric acid.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, spray. Avoid contact with skin, eyes and clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Agriculture/Specialty crop

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Urea (57-13-6)

USA AIHA	WEEL TWA (mg/m ³)	10 mg/m ³
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8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



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Materials for Protective Clothing	: Chemically resistant materials and fabrics.
Hand Protection	: Wear protective gloves.
Eye and Face Protection	: Chemical safety goggles.
Skin and Body Protection	: Wear suitable protective clothing.
Respiratory Protection	: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
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	: Liquid
Appearance	: Dark green
Odor	: Fermentation
Odor Threshold	: No data available
pH	: 6.5
Evaporation Rate	: No data available
Melting Point	: No data available
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)	: Not applicable
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Specific Gravity	: 1.18
Density	: 9.8 lb/gal
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

Ammonium polyphosphate (68333-79-9)	
LD50 Oral Rat	300 - 2000 mg/kg
Dipotassium phosphate (7758-11-4)	
LD50 Oral Rat	> 2000 mg/kg
Cobalt sulfate (10124-43-3)	
LD50 Oral Rat	424 mg/kg
Urea (57-13-6)	
LD50 Oral Rat	8471 mg/kg
Cuprate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, diammonium, (OC-6-21)- (67989-	

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88-2)	
ATE (Oral)	500.00 mg/kg body weight
Disodium octaborate, tetrahydrate (12280-03-4)	
LD50 Oral Rat	2500 mg/kg
Potassium acetate (127-08-2)	
LD50 Oral Rat	3250 mg/kg
LD50 Dermal Rabbit	> 20000 mg/kg
LC50 Inhalation Rat	> 5.6 mg/l/4h
D-Glucopyranose, oligomeric, decyl octyl glycosides (68515-73-1)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg

Skin Corrosion/Irritation: Not classified

pH: 6.5

Serious Eye Damage/Irritation: Not classified.

pH: 6.5

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Cobalt sulfate (10124-43-3)	
IARC group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May damage fertility or the unborn child (oral).

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

Ammonium polyphosphate (68333-79-9)	
LC50 Fish 1	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 Fish 2	123 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Sodium molybdate dihydrate (10102-40-6)	
LC50 Fish 1	609.1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [Semi-static])
EC50 Daphnia 1	1680.4 (1680.4 - 1776.6) mg/l (Exposure time: 48 h - Species: Daphnia magna [Semi-static])
ErC50 (Algae)	331.1 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [Static])
Cobalt sulfate (10124-43-3)	
LC50 Fish 1	3.6 mg/l
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])
Potassium acetate (127-08-2)	
LC50 Fish 1	6800 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
D-Glucopyranose, oligomeric, decyl octyl glycosides (68515-73-1)	
LC50 Fish 1	96.64 mg/l

12.2. Persistence and Degradability

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Persistence and Degradability	Not established.
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12.3. Bioaccumulative Potential

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Bioaccumulative Potential	Not established.
Cobalt sulfate (10124-43-3)	
BCF Fish 1	(no bioaccumulation)
Urea (57-13-6)	
BCF Fish 1	< 10
Log Pow	-1.59 (at 25 °C)
Potassium acetate (127-08-2)	
BCF Fish 1	(no bioaccumulation expected)

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information

: 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. Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

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

Key Grow Blue Butterfly 6-3-5	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Ferrate(1-), [[N,N'-1,2-ethanediybis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, ammonium, (OC-6-21)- (21265-50-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Ammonium polyphosphate (68333-79-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Dipotassium phosphate (7758-11-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Phosphoric acid, potassium salt (1:1) (7778-77-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Cobalt sulfate (10124-43-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Protein hydrolyzates, soya (68607-88-5)	
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	
Zincate(2-), [[N,N'-1,2-ethanediybis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, diammonium, (OC-6-21)- (67859-51-2)	

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Listed on the United States TSCA (Toxic Substances Control Act) inventory
Manganate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dipotassium, (OC-6-21)- (68015-77-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Cuprate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, diammonium, (OC-6-21)- (67989-88-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Potassium acetate (127-08-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
D-Glucopyranose, oligomeric, decyl octyl glycosides (68515-73-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Cobalt sulfate (10124-43-3)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

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

Date of Preparation or Latest Revision	: 12/12/2017
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [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
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Muta. 2	Germ cell mutagenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
Resp. Sens. 1	Respiratory sensitization, Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life

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H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)