



# NutriStart (NPS Fertilizer)

Safety Data Sheet

Revision Date: 6/30/2020

Version 1.0

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Name:** NutriStart (18.7-13.4-0-6S)

**Product Form:** Mixture

**Synonyms:** NutriStart, NPS, NP Fertilizer with Sulfur, 18.7-13.4-0-6S

### 1.2. Intended Use of the Product

**Agricultural Industry:** Fertilizer

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

Marco NPK

201 East Benton Street

Clinton, IL 61727

(217) 935-2178

[www.marconpk.com](http://www.marconpk.com)

### 1.4. Emergency Telephone Number

For Transportation Emergencies call Hazmat Response at (800) 229-5252

For Other Emergencies call 911 and/or Appropriate Regulatory Agencies

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

**GHS-US Classification**

Eye Irrit. 2A H319

Mild Skin Irrit. 3 H316

Full text of H-phrases: see section 16

### 2.2. Label Elements

**GHS-US Labeling**

**Hazard Pictograms (GHS-US):**



**Signal Word (GHS-US):**

Warning

**Hazard Statements (GHS-US):**

H319 - Causes serious eye irritation.

H316 - Causes mild skin irritation.

**Precautionary Statements (GHS-US):**

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P280 - Wear protective gloves, protective clothing, and eye protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 - If eye irritation persists: Get medical advice/attention.

### 2.3. Other Hazards

Hazardous to the aquatic environment.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Not applicable

### 3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Urea Ammonium Nitrate	(CAS No) 15978-77-5	36-40	Eye Irrit. 2A, H319
Ammonium polyphosphate	(CAS No) 68333-79-9	36-40	Not classified
Ammonium Thiosulfate	(CAS No) 7783-18-8	20-28	Mild Skin Irrit. 3, H316

Full text of H-Phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of 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).
- Inhalation:** Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.
- Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- 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.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

- General:** Causes eye irritation.
- Inhalation:** May cause irritation to the respiratory tract.
- Skin Contact:** May cause skin irritation.
- Eye Contact:** Causes eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.
- Ingestion:** If a large quantity has been ingested: Abdominal pain; Diarrhea; Nausea; Vomiting; Tingling in hands and feet; Weak pulse; Circulatory disturbances.

**Chronic symptoms:** Overexposure to this material may result in methemoglobinemia.

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

If exposed or concerned, get medical advice and attention.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable Extinguishing Media:** None known.

### 5.2. Special Hazards Arising From the Substance or Mixture

- Fire Hazard:** Contains substances that are oxidizers when in solid form. May cause fire if allowed to dry. Under conditions of fire, material may produce: Potassium oxides; Hydrogen chloride; Chlorine gas. Ammonium sulfate. Sulfur. Oxides of sulfur.
- Explosion Hazard:** May be explosive in contact with flammable or organic substances and confinement during fire.
- Reactivity:** Accelerates the rate of burning materials. Oxidizer if allowed to dry.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions closed containers may rupture or explode.

**Firefighting Instructions:** Do not allow product to evaporate to dryness. For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if

it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk. Keep upwind.

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

**Hazardous Combustion Products** Nitrogen oxides. Ammonia. Toxic vapors. Carbon oxides (CO, CO<sub>2</sub>). Sulfur oxides. Sulfur. Ammonium Sulfate. Hydrogen Sulfide.

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

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Use special care to avoid static electric charges. Keep away from open flames, hot surfaces and sources of ignition. No smoking. Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist or spray.

#### **6.1.1. For Non-Emergency Personnel**

**Protective Equipment:** Wear suitable protective clothing, gloves and eye/face protection.

**Emergency Procedures:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Ventilate area.

#### **6.1.2. For Emergency Personnel**

**Protective Equipment:** Wear suitable protective clothing, gloves and eye/face protection.

**Emergency Procedures:** If possible, stop flow of product. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Ventilate area.

### **6.2. Environmental Precautions**

Prevent entry to sewers and public waters. Contact competent authorities after a spill.

### **6.3. Methods and Material 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. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. Contact competent authorities after a spill.

### **6.4. Reference to Other Sections**

See heading 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1. Precautions for Safe Handling**

**Additional Hazards When Processed:** When heated, material emits irritating fumes. Smothering, contact with organic material, or combustible material may cause an explosive situation. Thoroughly wash out pipes, tanks, or valves before welding or burning. Residual solidified Ammonium Nitrate may explode under high temperatures and confinement. Heating above 140F will promote hydrolysis. Extreme cold (<32F) may cause crystallization of the product. Do not allow liquid to evaporate, as solid ammonium nitrate residue can explode.

**Precautions for Safe Handling:** Handle in accordance with good industrial hygiene and safety procedures. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area. Avoid all eye and skin contact, and do not breathe vapor or mist.

**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. Wash contaminated clothing before reuse.

## 7.2. Conditions for Safe Storage, Including Any Incompatibilities

<b>Technical Measures:</b>	Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. Ventilate confined spaces before entering. Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.
<b>Storage Conditions:</b>	Store in a dry, cool, and well-ventilated place. Keep in fireproof place. Store locked up. Store away from oxidizers, combustible materials, and all ignition sources. Protect container(s) against corrosion, physical damage, and extreme temperatures. Detached outside storage is preferable. May be corrosive to some metals especially aluminum.
<b>Incompatible Materials:</b>	Strong acids. Strong bases. Strong oxidizers. Chlorine. Hypochlorites. Metallic powders. Combustible materials. Chromates. Zinc. Copper and its alloys. Chlorates. Aluminum.

## 7.3. Specific End Use(s)

Agricultural Industry: Fertilizer

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1. Control Parameters

There are no established Exposure limits.

## 8.2. Exposure Controls

**Appropriate Engineering Controls:**

Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment:**

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



**Materials for Protective Clothing:**

Chemically resistant materials and fabrics.

**Hand Protection:**

Wear chemically resistant protective gloves.

**Eye Protection:**

Chemical goggles or safety glasses.

**Skin and Body Protection:**

Handle in accordance with good industrial hygiene and safety practice. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

**Respiratory Protection:**

Not required for normal conditions of use.

**Environmental Exposure Controls:**

Ensure adequate ventilation, especially in confined areas.

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

## 9.1. Information on Basic Physical and Chemical Properties

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Green clear Liquid
<b>Odor:</b>	Little or no detectable ammonia odor
<b>Odor Threshold:</b>	Not available
<b>pH:</b>	6.1-8
<b>Evaporation Rate:</b>	Not available
<b>Melting Point:</b>	Not available
<b>Freezing Point:</b>	Not available
<b>Boiling Point:</b>	Not available
<b>Flash Point:</b>	Not available
<b>Auto-ignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Flammability (solid, gas):</b>	Not available
<b>Lower Flammable Limit:</b>	Not available

Upper Flammable Limit:	Not available
Vapor Pressure:	Not available
Relative Vapor Density at 20C:	Not available
Relative Density	11.3 lbs/gal
Solubility:	Miscible
Partition Coefficient: N-Octanol/Water:	Urea: -1.59, Ammonium Nitrate: -3.1
Viscosity:	3.6 cP
Explosion Properties:	None known

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** Stable at ambient temperature and under normal conditions of use.
- 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:** Extremely high or low temperatures. Open flame. Heat. Sparks. High pressures - explodes if heated under confinement. Do not allow to dry out.
- 10.5. **Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Chlorine. Hypoclorites. Metallic powders. Combustible materials. Chromates. Zinc. Copper and its alloys. Chlorates.
- 10.6. **Hazardous Decomposition Products:** Ammonia. Hydrogen chlorine gas. Carbon oxide. Nitrogen oxide. Sulfur oxides. Sulfur. Ammonium sulfate. Ammonium Sulfate.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

Acute Toxicity:	Not classified
LD50 and LC50 Data:	Not available
Skin Corrosion/Irritation:	Not classified
ph:	6.1-8
Serious Eye Damage/Irritation:	Causes serious eye irritation.
ph:	6.1-8
Respiratory or Skin Sensitization:	Not classified
Germ Cell Mutagenicity:	Not classified
Teratogenicity:	Not classified
Carcinogenicity:	Not classified
Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Reproductive Toxicity:	Not classified
Specific Target Organ Toxicity (Single Exposure):	Not classified
Aspiration Hazard:	Not classified
Symptoms/Injuries After Inhalation:	May cause irritation to the respiratory tract.
Symptoms/Injuries After Skin Contact:	May cause skin irritation.
Symptoms/Injuries After Eye Contact:	Causes eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.
Symptoms/Injuries After Ingestion:	Ingestion may cause methemoglobinemia.
Chronic Symptoms:	Overexposure may result in methemoglobinemia.

### 11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<b>Water (7732-18-5)</b>	
LD50 Oral Rate	>90000 mg/kg
<b>Urea (57-13-6)</b>	
LD50 Oral Rate	8471 mg/kg
<b>Ammonium nitrate (6484-52-2)</b>	
LD50 Oral Rate	2217 mg/kg
LC50 Inhalation Rate	>88.8 mg/l/4h
<b>Ammonium polyphosphate (68333-79-9)</b>	

LD50 Oral Rate	4740 mg/kg
Ammonium thiosulfate (7783-18-8)	
LD50 Oral Rate	1950 mg/kg

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity:

Ecotoxicity	EPA Ecological Toxicity Rating:	Slightly toxic to practically non-toxic to aquatic organisms based on the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) acute toxicity ratings.
	Acute Toxicity to Fish:	(Oncorhynchus mykiss) 96-hr: LC50 => 101 mg/L
	Chronic Toxicity to Fish:	No data available.
	Acute Toxicity to Aquatic Invertebrates:	No data available.
	Chronic Toxicity to Aquatic Invertebrates:	No data available.
	Toxicity to Aquatic Plants:	No data available.
	Toxicity to Soil Dwelling Organisms:	No data available.
	Toxicity to Terrestrial Plants:	No data available.
Environmental Fate:	Stability in Water:	Stable.
	Stability in Soil:	Behaves as salts.
	Transport and Distribution:	No data available.
Toxicity:	Inorganic phosphates have the potential to increase the growth of freshwater algae, whose eventual death will reduce the available oxygen for aquatic life.	
Degradation Products:	Biodegradation:	The Phosphorus cycle is well understood.
	Photodegradation:	No data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Sewage Disposal Recommendations:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

**Waste Disposal Recommendations:** Place in an appropriate container and dispose of the contaminated material at a licensed site.

## 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 |
| 14.4. In Accordance with TDG  | Not regulated for transport |

## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

Urea Ammonium Nitrate Solution (15978-77-5)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Water (7732-18-5)	
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	
Ammonium nitrate (6484-52-2)	
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	
Ammonium thiosulfate (7783-18-8)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	

### 15.2. US State Regulations

If you are located in a state that has an OSH program approved by OSHA, you may be under state jurisdiction rather than federal jurisdiction and your state may have more stringent requirements than OSHA. You should consult your state regulations to ensure compliance.

### 15.3. Canadian Regulations

This product is not offered for sale in Canada.

## SECTION 16: OTHER INFORMATION

#### GHS Full Text Phrases:

Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Mild Skin Irrit. 3	Mild skin irritation Category 3
Ox. Sol. 3	Oxidizing solids Category 3
H272	May intensify fire; oxidizer
H316	Causes mild skin irritation
H319	Causes serious eye irritation
H320	Causes eye irritation.

**NFPA Health Hazard:** 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA Fire Hazard:** 0 - Materials that will not burn.

**NFPA Reactivity:** 0- Normally stable, even under fire exposure conditions, and area not reactive with water.



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