



Foliar Complete (8-12-40)

Safety Data Sheet

Revision Date: 11/28/23

Version 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Name: Foliar Complete

Product Form: Mixture

Synonyms: Foliar Complete, Nutri-Complete, 8-12-40

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

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

Acute aquatic toxicity 3

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):

H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US):

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P273 - Avoid release to the environment.

P281 - Wear personal protective equipment as required.

P308 + P313 - If exposed or concerned: Get medical advice/attention.

P391 - Collect spillage.

P405 - Store locked up.

P501 - Dispose of contents/container according to local/state/federal regulations.

2.3. Other Hazards

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)
Potassium nitrate	(CAS No) 7757-79-1	50-60
Boric Acid	(CAS No) 100043-35-3	<2
Copper EDTA	(CAS No) 7758-98-7	<1

Ingredients not specifically listed are non-hazardous and considered to be confidential business information under 29CFR 1910.1200

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

- General:** In case of persisting adverse effects consult a physician.
Never give anything by mouth to an unconscious person or a person with cramps.
- Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing.
Get medical attention for any breathing difficulty.
- Skin Contact:** Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
- Eye Contact:** 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:** Rinse mouth and drink plenty of water. Do not induce vomiting.
Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

- Inhalation:** Irritation to respiratory tract.
Delayed lung effects after short term exposure to thermal degradation products.
- Skin Contact:** May cause redness or irritation
- Eye Contact:** May cause redness or irritation
- Ingestion:** Ingestion of large amounts may cause: gastrointestinal disturbances

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

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

- Suitable Extinguishing Media:** Use any suitable means for extinguishing the surrounding fire.
- Unsuitable Extinguishing Media:** None, but attention should be paid to compatibility with chemicals surrounding.

5.2. Special Hazards Arising From the Substance or Mixture

Thermal decomposition can lead to the escape of toxic/corrosive gases and vapors.
Thermal decomposition products: (Nox), nitrites, phosphorous oxides, ammonia and metallic oxides.

5.3. Advice for Firefighters

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (self contained breathing apparatus (SCBA)).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Provide adequate ventilation. Wear personal protection equipment (Section 8).

6.2. Environmental Precautions

Do not allow to enter into surface water or drains. Ensure waste is collected and contained.

6.3. Methods and Material for Containment and Cleaning Up

Take up mechanically, placing in appropriate containers for disposal and recovery.
Unsuitable material for containment/taking up: None specified

6.4. Other Information

None

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid generation of dust.

Provide adequate ventilation.

Wear personal protective equipment.

Wash hands thoroughly after handling.

Do not eat, drink, or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Keep/store only in original container.

Store in well-ventilated place.

Keep container tightly closed.

Store locked up.

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:

Gas detectors should be used when toxic gases may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use explosion-proof equipment. Ensure all national/local regulations are observed. Provide sufficient ventilation to keep ammonia vapors below the permissible exposure limit.

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:

Chemical resistant suit. Rubber apron, boots.

Respiratory Protection:

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

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:

Clear liquid

Odor:

Little or no detectable ammonia odor

Odor Threshold:

Not available

pH:

6.5-7.8

Evaporation Rate:

Not available

Melting Point:

Not available

Freezing Point:

Not available

Boiling Point:	Not available
Flash Point:	Not available
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Flammability (solid, gas):	Not available
Lower Flammable Limit:	Not available
Upper Flammable Limit:	Not available
Vapor Pressure:	Not available
Relative Vapor Density at 20C:	Not available
Relative Density	10.65 lbs/gal
Specific Gravity:	1.281
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:** Accelerates the rate of burning materials. Oxidizer if allowed to dry.
- 10.2. Chemical Stability:** May cause fire or explosion; strong oxidizer.
- 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. Hypochlorites. Metallic powders. Combustible materials. Chromates. Zinc. Copper and its alloys. Chlorates. Aluminum
- 10.6. Hazardous Decomposition Products:** Nitrogen oxides. Ammonia. Carbon oxides (CO, CO₂). Hydrogen chlorine gas.

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:	6.5-7.8
Serious Eye Damage/Irritation:	Causes serious eye irritation.
ph:	6.5-7.8
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:

Water (7732-18-5)	
LD50 Oral Rate	>90000 mg/kg
Urea (57-13-6)	

LD50 Oral Rate	8471 mg/kg
Ammonium polyphosphate (68333-79-9)	
LD50 Oral Rate	4740 mg/kg
Potassium chloride (7447-40-7)	
LD50 Oral Rate	2600 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	Biodegradation:	The Phosphorus cycle is well understood.
Products:	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 polyphosphate (68333-79-9)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	
Potassium chloride (7447-40-7)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	

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. 2A	Serious eye damage/eye irritation Category 2A
H319	Causes serious eye irritation
H335	May cause respiratory 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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