

BioNutrients Soluble AG 8-0-9

Section 1 - IDENTIFICATION

1.1. Product Identifier

Product name: BioNutrients Soluble 8-0-9
Synonym: Natural Soil Conditioner & Biostimulant

1.2. Recommended Use / Restrictions

Identified Uses: For soil conditioning & remediation of fairways/greens, sports turf, lawn care and trees
Restrictions: N/A

1.3. Supplier Details

Company: Growth Products, Ltd.
80 Lafayette Avenue
White Plains, NY 10603-1603 USA
+011 914-428-1316 (9 am - 5 pm EST Mon - Fri)
questions@growthproducts.com

1.4. Emergency Telephone Number

Emergency Telephone: +011 914-428-1316 (9 am - 5 pm EST Mon - Fri)

Section 2 - HAZARD(S) IDENTIFICATION

2.1. Classification of substance or mixture

Target Organs: Lungs, Respiratory system, Eyes & Skin

Physical Hazards: Acute Toxicity 4, Oral – H303
Skin Irrit. 2 – H316
Eye Irrit. 2B – H320
STOT SE 3 – H335

Health Hazards:

Environmental Hazards:

2.2. Label Elements

Pictogram(s):



Signal Word: WARNING!

Hazard Statements: H316 Causes mild skin irritation
H320 Causes eye irritation
H335 May cause respiratory irritation

Precautionary Statements: H261 Avoid breathing dust/fume/gas/mist/vapours/spray
P264 Wash face, hands and any exposed skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention
P337+P313 If eye irritation persists: Get medical advice/attention
P362+P364 Take off contaminated clothing and wash it before reuse

Precautionary Statements continued: P403+P233+P405 Store in a well-ventilated place. Keep container tightly closed. Store locked up.
P501 Dispose of contents/container in accordance with local / regional / national / international regulation

2.3. Other Hazards

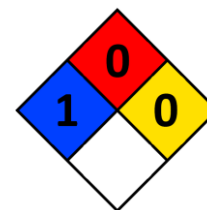
This product does not contain any substance classified as PBT or vPvB

Potential Health Effects

Eyes: May cause irritation or inflammation, temporary
Inhalation: Irritating and soreness in throat and nose. In extreme exposures some congestion may occur.
Skin: Prolonged or repeated skin exposure may cause dermatitis.
Ingestion: Not hazardous when ingested.

NFPA Ratings

Health:	1	Slightly hazardous
Flammability:	0	Will not burn
Reactivity:	0	Stable
Specific Hazard:		N/A



HMIS Ratings

Health:	1	Minor hazard
Flammability:	0	Minimal hazard
Reactivity:	0	Minimal hazard
Personal (PPE):	C	Goggles, Gloves, Protective synthetic apron (Dust mask)

Health	<i>minor</i>	1
Flammability	<i>minimal</i>	0
Physical Hazard	<i>minimal</i>	0
Personal Protection		C

Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical Name	CAS Registry No.	REACH No.	ENECS No.	Classification
Ferrous Sulfate:	7782-63-0	-	-	GHS Acute Tox., Oral 4 – H303 Skin Irrit. 2 – H316 Eye Irrit. 2B – H320
Plant extracts:	9010-10-0	-	-	Not Classified
Fish hydrolysate:	-	-	-	GHS-US: Skin Irrit. 3 – H316 Eye Irrit. 2B – H320
Potassium humate:	68514-28-3	-	-	Nontoxic
Bacillus:	9013-01-8	-	-	N/A according to GHS criteria for this product
Yeast (<i>Saccharomyces cerevisiae</i>):				
Yucca schidigera:	223749-05-1	-	-	GHS-US Eye Irrit. 2B – H320 Skin Irrit. 3 – H316
Kelp extract:	69235-69-4	-	-	Nontoxic

Section 4 - FIRST-AID MEASURES

4.1. Description of first-aid measures

Inhalation: Move affected person to fresh air at once and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention/advice.

Ingestion: Never give anything by mouth to an unconscious person. Do not induce vomiting unless instructed by medical professional. If conscious, rinse mouth thoroughly with water. If conscious, give water. Get medical attention/advice in symptoms persists.

Skin Contact: Flush with plenty of water for at least 15 minutes and take off all contaminated clothing. Get medical attention/advice if irritation persists.

Eye Contact: Rinse cautiously with plenty of water for at least 15 minutes and seek medical attention/advice if irritation persists.

4.2. Most important symptoms and effect, both acute and delayed

Inhalation: May cause respiratory irritation. There may be irritation of the throat with a feeling of tightness in the chest.

Ingestion: Ingestion may cause nausea, vomiting and severe stomach and digestive irritation/burns. There may be soreness and redness of the mouth and throat.

Skin Contact: Skin contact may cause redness and irritation, dermatitis. Prolonged or repeated skin contact can result in the development of allergy-like skin reactions (e.g. rashes, dermatitis and to individuals allergic to fish)

Eye Contact: There may be irritation and redness. Profuse watering of the eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for doctor: No specific recommendations. If in doubt, get medical attention promptly. Treatment may vary with the condition of victim and specifics of incident.

Specific treatments: Eye bathing equipment should be available on the premises. Provide quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

Section 5 - FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Use extinguishing agent suitable for surrounding area.

Unsuitable extinguishing media: N/A

Environmental Hazards: Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: Contact with combustible material may cause fire.

Hazardous combustion products: Product components under conditions of fire may produce Ammonia; Nitrogen oxides; Biuret. Do not inhale smoke and gases. (See also Stability and Reactivity section).

5.3. Advice for firefighters

Protective actions during firefighting: No specific firefighting precautions known, Irritant, non-flammable, water soluble. Do not inhale gases created by fire. Do not allow run-off from firefighting to enter drains or watercourses.

Special protective equipment for firefighters: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

Section 6 - ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear protective clothing as described in Section 8 of this safety data sheet.

6.2 Environmental precautions: Avoid the spillage or runoff entering drains, sewers or watercourses. Any release into the environment may be subject to federal/national or local reporting requirements.

6.3 Methods and material for containment and cleanup

Methods for cleaning up: Stop leak if possible without risk. Neutralize spill. Contain and absorb spillage with sand, earth or other noncombustible material. Transfer to a suitable container for disposal. Clean surfaces thoroughly with plenty of water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4 Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

Section 7 - HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Using precautions: Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Isolate and post spill area. Keep people away from and upwind of spill/leak. Eliminate all sources of ignition and remove combustible materials.

Advice on general occupational hygiene: Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage precautions: Store closed in original container in a dry, cool and well-ventilated place. Store in the dark. Keep away from incompatible materials. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s): The identified uses for this product are detailed in Section 1.2.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control Parameters

Occupational exposure limits

Material	Type	Value	Source
Ferrous Sulfate (CAS 7782-63-0):	No biological exposure limits noted for ingredient(s)	1 mg/m ³	US ACGIH Threshold Limit Values US NIOSH: Pocket guide to Chemical Hazards
Plant extracts (CAS 69235-69-4):	N/A	N/A	Not listed
Fish hydrolysate (CAS N/A):	N/A	N/A	Not listed
Dried bacillus subtilis (CAS 68038-70-0):	N/A	N/A	N/A
Yucca schidigera (CAS 223749-05-1):	N/A	N/A	Not listed in IFA database
Kelp extract (CAS 69235-69-4):	N/A	N/A	N/A
Potassium humate 9CAS 68514-28-3):	N/A	N/A	N/A

8.2. Exposure controls

Protective equipment

General information: Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

Appropriate engineering controls: Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas to keep below nuisance dust limit of 15 mg/m³

Eye / face protection: Use chemical splash-type goggles / safety glasses. Have eye wash station available in immediate vicinity.

Hand protection: Wear approved impermeable gloves. Thoroughly rinse the outside of gloves with water prior to removal. Inspect regularly for leaks.

Other skin and body protection: Wear impervious clothing such as an approved splash protective suit, protective apron. Have emergency shower in immediate vicinity. Wash contaminated clothing before reuse. Handle in accordance with good hygiene and safety practices

Hygiene measures: Avoid breathing vapors, mist or gas. Clean water should be available for washing in case of eye or skin contamination.

Respiratory protection: If concentrations in excess of 10 ppm are expected, use NIOSH/DHHS approved self-contained breathing apparatus (SCBA) or other approved air-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)).

Environmental exposure controls: Eye bathing equipment should be available on the premises. Provide quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available. Ensure adequate ventilation, especially in confined areas.

Equipment:

HMIS Letter:

C



Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State:	Powder	Evaporation Rate:	N/A
Color	Brown	Boiling Point:	N/A
Odor:	Organic Odor	Freezing Point:	N/A
Weight per Gallon / Liter:	40.82 / cu ft.	Viscosity:	N/A
Storage Life at 70F:	>18 months	Flash Point/Method:	N/A
pH – 21C:	4.5	Vapor Pressure:	N/A
Solubility:	99% soluble in water	Storage Temperature:	N/A

Section 10 - STABILITY AND REACTIVITY

- 10.1. Reactivity:** Keep away from reducing agents, strong bases, organics, combustible material, and oxidizable materials. Avoid heating this substance.
- 10.2. Chemical Stability:** Stable under normal conditions. Decomposes on heating. Stable under recommended storage conditions.
- 10.3. Possibility of Hazardous Reactions:** Contact with organic substances may cause fire or explosion. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.
- 10.4 Conditions to Avoid:** Excessive heat; Contamination; Exposure to UV-rays; pH variations. Store out of direct light.
- 10.5 Incompatible Materials**
- Materials to avoid:** None known
- 10.6 Hazardous Decomposition Products:** N/A

Section 11 - TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Toxicological effects:

Acute toxicity Dermal LD₅₀: 0.5 ml dosage level (rabbit)

Acute toxicity Oral LD₅₀: 5000 mg/kg dosage level (rat)

Acute toxicity Inhalation LD₅₀: N/A

Chronic Toxicity: N/A

Symptoms: Dust, fume, gas, vapors, mists, can cause upper airway irritation, inflammation of the nose, hoarseness, shortness of breath, and a sensation of burning or tightness in the chest. Prolonged exposure can cause irritation, especially to individuals allergic to fish. Exposure to can cause stinging pain and tearing of eyes.

Teratogenicity: N/A

Mutagenicity: This product is not recognized as mutagenic by Research Agencies. In vivo tests did not show mutagenic effects.

Embryotoxicity: N/A

Specific Target Organ Toxicity: N/A

Reproductive Toxicity: No toxicity to reproduction in animal studies.

STOT SE: Not Classified

STOT RE: Not Classified

Target Organs: Eyes, Respiratory System, Skin

Respiratory Sensitization: N/A

Skin Sensitization: Moderately irritating

Carcinogenicity

IARC: N/A
ACGIH: N/A

NTP: N/A
OSHA: N/A

Section 12 - ECOLOGICAL INFORMATION
Ecotoxicity

- 12.1. Toxicity:** Not expected to have significant environmental effects
12.2. Persistence and degradability: Not persistent, biodegradable
12.3. Bioaccumulative potential: Not bioaccumulative
12.4. Mobility in Soil: Will likely be mobile in the environment due to its water solubility.
12.5. Results of PBT and vPvB Assessment: N/A
12.6. Other Adverse Effects: N/A

Section 13 - DISPOSAL CONSIDERATIONS
13.1. Waste Treatment Methods

Disposal methods: Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product, residue and/or container.

The information offered in Section 13 id for the product as shipped.

US EPA Waste Number: N/A

Section 14 - TRANSPORTATION INFORMATION

General: Product is a non-regulated material; not flammable, not corrosive, not explosive and not radioactive.
 In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

Regulatory Information	14.1 UN Number	14.2 Proper Shipping Name	14.3 Class(es)	14.1 Packing Group	14.5 Environmental Hazard	14.6 Special Precautions For User	Additional Information
ADR / RID Class	Not regulated for transportation	Not regulated	Not regulated	Not regulated	Not classified as marine pollutant	N/A	N/A
ADNR Class	Not regulated for transportation	Not regulated	Not regulated	Not regulated	Not classified as marine pollutant	N/A	N/A
IMDG Class	Not regulated for transportation	Not regulated	Not regulated	Not regulated	Not classified as marine pollutant	N/A	N/A
IATA class	Not regulated for transportation	Not regulated	Not regulated	Not regulated	Not classified as marine pollutant	N/A	N/A

14.7. Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code: Not regulated

Section 15 - REGULATORY INFORMATION
15.1. Safety, health and Environmental Regulations / Legislation Specific for the Substance or Mixture

EU legislation: Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 453/2010 of May 2010.

US Federal Regulations

SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories:

Acute health hazard:	NO	Sudden release of pressure hazard:	NO
Chronic health hazard:	NO	Reactive Hazard:	NO
Fire hazard:	NO		

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA / EPCRA: This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Response Compensation and Liability Act (CERCLA) or as an extremely hazardous substance (EHS) under the Emergency Planning and Community Right to Know Act (EPCRA) / Superfund Amendments and Reauthorization Act (SARA).

Section 16 - OTHER INFORMATION**REVISED DATE: 30 November 2016****Other Precautions:****Read entire label before using****Abbreviations / Acronyms:**

N/E	Not Established	N/A	Not applicable
ACGIH	American Conference of Governmental Industrial Hygienists		
TLV	Threshold Limit Values		
PEL	Permissible Exposure Limit		
REL	Recommended Exposure Limit		
OSHA	Occupational Safety and Health Administration		
NIOSH	National Institute for Occupational Safety and Health		
TWA	Time Weighted Average over 8 hours of work		
TLV	Threshold Limit Value over 8 hours of work		
REL	Recommended Exposure Limit		
PEL	Permissible Exposure Limit		
STEL	Short Term Exposure Limit during x minutes		
IDLH	Immediately Dangerous to Life or Health		
TSCA	Toxic substance Control Act (United States)		
DSL	Domestic Substance List (Canada)		
EINECS	European Inventory of Existing Commercial Chemical Substances (Europe)		
ELINCS	European List of Notified Chemical Substances (Europe)		
ENCS	Existing Chemical Substances		
IECSC	Inventory of Existing Chemical Substances		
HMIS	Hazardous Material Identification System (American Coatings Association)		
NFPA	National Fire Protection Association		
PBT	Persistent Bioaccumulative and Toxic		
vPvB	Very Persistent and very Bioaccumulative		
STOT SE	Specific Target Organ Toxicity; Single Exposure		
STOT RE	Specific Target Organ Toxicity; Repeated Exposure		
GER-MAK	Germany Maximum Workplace Concentration		
DOT	Department of Transportation		
TDG	Transportation of Dangerous Goods (Canada)		
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road		
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail (EU)		
ADNR	Regulation for the Carriage of Dangerous Substances on Waterways (EU)		
IMDG	International Maritime Dangerous Goods		
ICAO	International Civil Aviation Organization		
IATA	International Air Transport Association		

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