



To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrant or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team
Zep Inc.

SECTION 1: IDENTIFICATION

1.1 Product Identifier AQ-TY-0001-02
Trade Name Growthful™ Post Emerge Spray

1.2 Product Use Agricultural
Identified Use Soil Amendment for Growth Enhancement Post Emergence to Harvest via Spray

1.3 Manufacturer/Supplier **Company** Aqueus LLC
Address 1132 E. Big Beaver Road Troy, MI 48083
Telephone (248) 218-0347
Email hello@aqueus.co

1.4 Emergency Telephone Number **Emergency Phone** Chemtrec (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture: Complies with OSHA 29 CFR - 1910.1200 Section (i) "Trade Secrets", contains no hazardous components under current OSHA definitions.

2.1.1 GHS Classifications and Regulation (EC) No. 1272/2008 (CLP): Corrosive to Metals

2.1.2 Directive 67/548/EEC & Directive 1999/45/EC: Corrosive to Metals

2.2 Label Elements

2.2.1 Label Elements according GHS Classifications and Regulation (EC)

No. 1272/2008 (CLP)
Hazard Pictogram(s) None
Signal Word None
Hazard Statement None
Precautionary Statements None

2.2.2 Label Elements

Hazard Symbol None
Risk Phrases R36/37 Irritating to eyes and skin
Safety Phrases S36/37/39 Wear suitable protective clothing, gloves, and eye/face protection

2.3 Other Hazards

OSHA : Non-hazardous under OSHA Hazard Communication Standard

HMIS

Health: 0
 Flammability: 0
 Reactivity: 0
 Personal Protection: A

HEALTH	0
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	A

WHMIS (Canada): None

2.4 Additional Information: No fragrances added

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS
3.1 GHS Classification (EC Classification No. 1272/2008/EC)

Chemical Identity	CAS No.	%W/W
Hydrogen Sulfate - HSO_4^-	14996-02-2	0.25 – 0.30%
Hydronium – H_3O^+	13968-08-6	0.07 – 0.09%

3.2 Additional Information: None
SECTION 4: FIRST AID MEASURES
4.1 Description of First Aid Measures

Inhalation: Not a likely route of exposure. Remove to fresh air if irritation occurs. If symptoms develop, obtain medical attention.

Skin Contact: Exposure to skin normally does not cause irritation or redness. No toxicity associated with the product being absorbed through skin. Wash exposed areas with water. In the unlikely event of irritation, seek medical advice.

Eye Contact: This product may cause irritation to the eyes after direct contact with concentrate. Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: No toxicity associated with ingestion. Ingesting large volumes may cause minor gastrointestinal distress due to separation of grease and oil in the digestive tract. Drink water to assist in digestion if swallowed.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Acute: Ingestion will cause minor distress to the gastrointestinal tract. May cause chemical and mechanical eye irritation with direct contact.

Delayed and Chronic Effects: Expected to be similar to acute exposures.

4.3 Indication of the Immediate Medical Attention and Special Treatment Needed: Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Not flammable or combustible by OSHA/WHMIS criteria. Not sensitive to mechanical impact and static discharge.

Flash Point	Explosive Limits	Temperatures
> 220° C (428° F)	NA Auto-Ignition	NA

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate to surrounding fire conditions.

Unsuitable Extinguishing Media: None known

5.2 Special Hazards Arising from the Substance or Mixture: Containers may rupture from exposure to high temperatures, releasing contents that may be slippery.

5.3 Advice for Firefighters: Suitable protective clothing should be worn in fire conditions. Extinguish preferably with dry chemical, foam or water spray.

5.4 Hazardous Combustion Products: Sulfur Oxides, Calcium Oxides

NFPA 704: HEALTH HAZARD-BLUE 0 FLAMMABILITY-RED 0 INSTABILITY-YELLOW 0 SPECIAL HAZARD – WHITE A

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: None

6.2 Environmental Precautions: None

6.3 Methods and Material for Containment and Cleaning Up: Rinse area with water. Dispose of material in accordance with local regulations.

6.4 Reference to Other Sections: See Also Section 7, 8, 13

6.5 Additional Information: None

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling: Avoid contact with eyes. No special precautions required.

7.2 Conditions for Safe Storage: Store in closed containers between 35°F and 120°F

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION
8.1 Control Parameters
8.1.1 Occupational Exposure Limits

Substance	CAS No.	LTEL (8hr TWA ppm)	LTEL (8hr TWA mg/m3)	STEL (ppm)	STEL (mg/m3)
No Threshold Limit Value (TLV) established (ACGIH). No Permissible Exposure Limit (PEL) established (OSHA).					

OELs are not available for non-listed components.

Limit Value Type (Country of Origin)	Substance	CAS No.	Biological Limit Value
No Threshold Limit Value (TLV) established (ACGIH). No Permissible Exposure Limit (PEL) established (OSHA).			

8.1.3 PNECs and DNELs: No PNECs or DNELs are available for this product. As with all chemical products, users are cautioned to avoid unnecessary exposures.

8.2.2 Personal Protection Equipment

Respiratory Protection: Usually not needed.

Eye Protection: Safety glasses are suggested as good practice.

Hand Protection: Acid resistant gloves.

Skin and Body Protection: Wear acid resistant personal protective gear

Engineering Controls: No special controls required.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
9.1 Information on Basic Physical and Chemical Properties

	Concentrate
Appearance:	Clear liquid
Color:	Light Amber, translucent
Odor:	None to Mild
Odor Threshold:	Not available
pH:	1.0 – 1.5
Melting Point / Freezing Point:	NA)

Initial Boiling Point:	Not available
Boiling Point:	> 112 °C (233.6° F)
Flash Point:	> 220 °C (428° F)
Evaporation Rate:	1 (Water = 1)
Flammability (solid, gas):	Non-Flammable
Upper/Lower Flammability Limit:	Non-Flammable
Auto-ignition Temperature:	Non-Flammable
Vapor Pressure:	Not available
Vapor Density:	Not available
Relative Density:	Not available
Solubilities:	Infinitely miscible with water
Partition Coefficient: N-octanol/Water:	Not available
Decomposition Temperature:	Not available
Percent Volatile, wt. %:	0%
Density Target:	1.001 g/mL
Density Range:	1.000 – 1.003 g/ml
VOC Content, wt. %:	0% 0%

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Chemically inert. No known reactive materials.

10.2 Chemical Stability: Stable under normal conditions. Avoid temperature extremes.

10.3 Possibility of Hazardous Reactions: No hazardous reactions observed.

10.4 Conditions to Avoid: Do not freeze. Do not use above ambient temperature.

10.5 Incompatible Materials: None

10.6 Hazardous Decomposition Product(s): Decomposition produces trace amounts of carbon dioxide and other natural gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Substance: Hydrogen Sulfate, CAS 14996-02-2. Hydronium, CAS 3968-08-6

11.1 Information on Toxicological Effects

11.1.2 Mixtures

Effects of Acute Exposure

Ingestion: Not Known. Product may be irritating to gastrointestinal tract.

Inhalation: Not Known. Not a likely route of exposure.

Skin Contact: Not Known. Prolonged contact may result in mild irritation.

Eye Contact: Not Known. Contact may result in mechanical and chemical irritation.

Corrosivity: None expected.

Repeated Dose Toxicity: Expected to be similar to single exposures.

Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by ACGIH, IARC, OSHA, or NTP.

Mutagenicity: Not available

Toxicity for Reproduction: Not available

11.2 Other Information: None

SECTION 12: ECOLOGICAL INFORMATION

- 12.1 Toxicity:** Not expected to be harmful to aquatic or soil environments.
- 12.2 Persistence and Degradability:** Readily biodegradable organic liquid
- 12.3 Bio-accumulative Potential:** Not available
- 12.4 Mobility in Soil:** Not available
- 12.5 Results of PBT and vPvB Assessment:** Not available
- 12.6 Additional Information on Eco-toxicity:** The product does not add to the AOX-value of effluent water (DIN 38409).

SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1 Waste Treatment Methods:** Disposal should be in accordance with local, state or national legislation. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. Containers must not be punctured or destroyed by burning, even when empty.
- 13.2 Additional Information:** None

SECTION 14: TRANSPORT INFORMATION

- Land transport (ADR/RID) (c)(d):** Not classified as dangerous for transport.
- U.S. Department of Transportation (DOT) (c)(d):** Not classified as dangerous for transport.
- Canada Transportation of Dangerous Goods (TDG) (c)(d):** Not classified as dangerous for transport.
- Sea Transport (IMDG) (c)(d):** Not classified as dangerous for transport.
- Air Transport (ICAO/IATA) (c)(d):** Not classified as dangerous for transport.
- (c)– Consult with transport provider. (d) – Check relevant regulations for Special Provisions.*

SECTION 15: REGULATORY INFORMATION
15.1 Safety, Health and Environmental Regulations and Associated Hazards for the Mixture
15.1.1 Regulations

TSCA STATUS	A component or components of this products is not listed on the TSCA Inventory of Existing Chemical Substances.
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15.2 Chemical Safety Assessment: Corrosive
SECTION 16: OTHER INFORMATION
Hazard Statements and Precautionary Statements: Corrosive

Training Advice: None

Additional Information: Replaces all previous editions.

References: RTECS, CAS Registry, EINECS/ESIS, Manufacturer Information

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Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet