

SAFETY DATA SHEET

HARVEST PLUS

1. Product and Company Identification

Product Code: Z-HPLUS
Product Name: HARVEST PLUS
Trade Name: HARVEST PLUS
Company Name: Stoller
9090 Katy Freeway
Suite 400
Houston, TX 77024
Phone Number: 1 (713)461-1493
Web site address: www.stollerusa.com
Email address: compliance@stollerusa.com
Emergency Contact: CHEMTREC, In the US and Canada call 1 (800)424-9300
CHEMTREC, From other countries call +1 (703)527-3887
Information: 1 (800)539-5283

2. Hazards Identification

Acute Toxicity: Skin, Category 5
Eye Irritation, Category 2B
Acute Toxicity: Inhalation, Category 4
Acute Toxicity: Oral, Category 4
Aquatic Toxicity (Chronic), Category 4



GHS Signal Word: **Warning**

GHS Hazard Phrases: H302 - Harmful if swallowed.
H313 - May be harmful in contact with skin.
H320 - Causes eye irritation.
H332 - Harmful if inhaled.
H413 - May cause long lasting harmful effects to aquatic life.

GHS Precautionary Phrases: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.

GHS Response Phrases: P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P337+313 - If eye irritation persists, get medical advice/attention.

GHS Storage and Disposal Phrases: P501 - Dispose of contents/container to permitted waste facility.

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Potential Health Effects (Acute and Chronic):	Acute: Depending on the duration of contact, overexposure can irritate the eyes, skin, mucous membranes and any other exposed tissue. Chronic: Expected toxicity hazard: slight Not known. Expected toxicity hazard: slight to moderate.
Inhalation:	Causes respiratory tract irritation.
Skin Contact:	May be harmful if absorbed through skin. May cause skin irritation.
Eye Contact:	Causes eye irritation. Causes redness and pain.
Ingestion:	Harmful if swallowed. May cause cardiac disturbances. May cause irritation of the digestive tract. May cause nausea and vomiting. CNS effects (excitement or depression, lethargy, headache, coma, seizures), dehydration, arrhythmias, shock and metabolic acidosis have been reported in extreme adult and pediatric cases of exposure to Boric acid. RTECS: QJ6950000

3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	RTECS #
1336-21-6	Ammonium hydroxide	<40.0 %	BQ9625000
10034-96-5	Manganous sulfate	<10.0 %	OP0893500
7446-20-0	Zinc sulfate heptahydrate	<10.0 %	ZH5300000
10043-35-3	Boric acid	< 2.0 %	ED4550000

4. First Aid Measures

Emergency and First Aid Procedures:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
In Case of Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing give artificial respiration. If breathing becomes difficult, call a physician.
In Case of Skin Contact:	Launder clothing before reuse. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Consult a physician.
In Case of Eye Contact:	Call a physician if irritation persists. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
In Case of Ingestion:	Drink plenty of water. Call a physician or poison control center immediately for advice on inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person.
Indication of any immediate medical attention and special treatment needed:	No data available.
Note to Physician:	Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire Fighting Instructions:	Wear self contained breathing apparatus for fire fighting if necessary. Further information: The product itself does not burn. No data available.
Flammable Properties and Hazards:	Sulfur oxides, Manganese/manganese oxides. Copper oxides.
Hazardous Combustion Products:	N.A.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8. Avoid dust formation. Avoid breathing dust.
Environmental Precautions:	If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways. Do not let product enter drains. Discharge into the environment must be avoided. Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Pick up and arrange disposal without creating dust. Sweep up and shovel.
Steps To Be Taken In Case Material Is Released Or Spilled:	<p>Personal precautions. Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.</p> <p>Environmental precautions. If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways. Do not let product enter drains. Discharge into the environment must be avoided. Methods for cleaning up. Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Sweep up and shovel.</p>

7. Handling and Storage

Precautions To Be Taken in Handling:	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Precautions To Be Taken in Storing:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry place. Hygroscopic. Store in a cool, dry place, away from food, feed, clothing materials and living quarters. Whenever possible, place chemicals on secondary containers or diked area. Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Keep containers tightly closed when not in use. Moisture sensitive.
Other Precautions:	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
1336-21-6	Ammonium hydroxide	No data.	No data.	No data.
10034-96-5	Manganous sulfate	CEIL: 5 mg/m ³	TLV: 0.2 mg/m ³ as Mn	No data.
7446-20-0	Zinc sulfate heptahydrate	No data.	No data.	No data.
10043-35-3	Boric acid	No data.	TLV: 2 mg/m ³ STEL: 6 mg/m ³	No data.

Respiratory Equipment (Specify Type): Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.

Eye Protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses with side-shields conforming to EN166. Safety glasses.

Protective Gloves: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Other Protective Clothing: Complete suit protecting against chemicals. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Impervious clothing.

Engineering Controls (Ventilation etc.): Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Environmental Exposure Controls: If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: Dark amber color.
Slight ammonia odor.

pH: 8.5 - 10.5

Melting Point: No data.

Boiling Point: No data.

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Flash Pt:	No data.
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	1.26 - 1.30
Density:	~ 10.6 LB/GA
Solubility in Water:	No data.
Saturated Vapor Concentration:	No data.
Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	No data.
Decomposition Temperature:	No data.
Viscosity:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Information with regard to primary physical hazard:	

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	Avoid moisture. Exposure to moisture.
Incompatibility - Materials To Avoid:	No data available.
Hazardous Decomposition or Byproducts:	No data available.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information:	<p>Germ cell mutagenicity: No data available. (Ammonium hydroxide)</p> <p>Reproductive Toxicity: Specific target organ toxicity - single exposure: Specific target organ toxicity - repeated exposure: Aspiration hazard: Cytogenetic analysis. Species: Hamster. Cell Type: ovary.</p> <p>Sister chromatid exchange: Species: Mouse.</p> <p>Micronucleus test. Cell Type: sperm.</p> <p>Mouse. male. Oral. Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). May cause damage to organs through prolonged or repeated exposure.</p> <p>Acute toxicity.</p> <p>Dermal. In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance.</p> <p>CAS# 10043-35-3: Acute toxicity, LD50, Oral, Rat, 2660. MG/KG. Result: Gastrointestinal:Hypermotility, diarrhea. Gastrointestinal:Nausea or vomiting. ; Journal of the American Medical Association, American Medical Association, 535 N. Dearborn St., Chicago, IL 60610, Vol/p/yr: 128,266, 1945</p>
Irritation or Corrosion:	<p>Skin corrosion/irritation. No data available.</p> <p>Serious eye damage/eye irritation: Eyes - rabbit - Result: Tumorigenic:Tumors at site or application. Serious eye damage/eye irritation no data available.</p>
Sensitization:	No data available.
Chronic Toxicological Effects:	<p>Specific target organ toxicity -single exposure (Globally Harmonized System) No data available.</p> <p>Specific target organ toxicity -repeated exposure: no data available.</p>
Carcinogenicity/Other Information:	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Mouse. Oral. Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Endocrine:Thyroid tumors.</p>
Carcinogenicity:	<p>NTP? No IARC Monographs? No OSHA Regulated? No</p>

12. Ecological Information

Results of PBT and vPvB assessment:	No data available.
Persistence and Degradability:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.
Other adverse effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life. Toxic to aquatic life. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. No data available.

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Revision: 05/04/2022
Supersedes Revision: 08/05/2021

13. Disposal Considerations

Waste Disposal Method: PRODUCT:
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging: Observe all federal, state, and local environmental regulations. Dispose of as unused product.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated. Trade Name: HARVEST PLUS

DOT Hazard Class:

UN/NA Number:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not Regulated. Trade Name: HARVEST PLUS

UN Number: **Packing Group:**

Hazard Class:

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not Regulated. Trade Name: HARVEST PLUS

UN Number: **Packing Group:**

Hazard Class:

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
1336-21-6	Ammonium hydroxide	No	Yes NA	No
10034-96-5	Manganous sulfate	No	No	Yes-Cat. N450
7446-20-0	Zinc sulfate heptahydrate	No	No	Yes-Cat. N982
10043-35-3	Boric acid	No	No	No

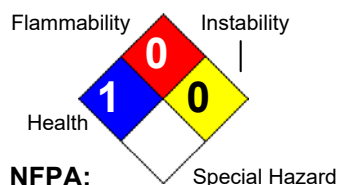
Regulatory Information: TSCA Inventory: In compliance with inventory requirements for commercial purposes.

16. Other Information

Revision Date: 05/04/2022

Previous revision: 08/05/2021

Hazard Rating System:



Additional Information About No data available.

This Product:

Company Policy or Disclaimer:

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