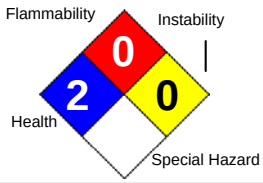
MATERIAL SAFETY DATA SHEET
X-TRA POWER



Printed: 06/18/2018
Revision: 03/15/2016

1. Product and Company Identification

Product Code: Z-XTPOWER

Product Name: X-TRA POWER

Trade Name: X-TRA POWER

Manufacturer Information

Company Name: Stoller Enterprises
284 Industrial Drive
Regina, SK,

Emergency Contact: CHEMTREC, In the US and Canada call 1 (800)424-9300

Alternate Emergency Contact: CHEMTREC, From other countries call +1 (703)527-3887

Information: For agricultural use only 1 (800)539-5283

Web site address: http://stollerenterprises.ca/

Intended Use: For agricultural use only

Synonyms

Chelated micronutrient solution.

Revision Date: 03/15/2016

2. Composition/Information on Ingredients

Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TWA	Other Limits
1. Manganese oxide	1344-43-0	< 2.0 %	No data.	5 mg/m³ as Mn	No data.
2. Zinc oxide	1314-13-2	< 5.0 %	5 mg/m³ (fume); 15 mg/m³	2 mg/m³ (resp.)	No data.
3. Magnesium oxide (MgO)	1309-48-4	< 2.0 %	15 mg/m³ (particulate)	10 mg/m³ (Inhalation)	No data.
4. Ethanol, 2-amino-, 2-hydroxy-1,2,3-propanetricarboxylate (salt)	17863-38-6	<35.0 %	No data.	No data.	No data.
5. Copper(II) sulfate pentahydrate	7758-99-8	< 5.0 %	No data.	1 mg/m³ as Cu	No data.

Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Manganese oxide	1344-43-0	No data.	No data.	No data.	No data.
2. Zinc oxide	1314-13-2	No data.	No data.	10 mg/m³ (resp.)	No data.
3. Magnesium oxide (MgO)	1309-48-4	No data.	No data.	No data.	No data.
4. Ethanol, 2-amino-, 2-hydroxy-1,2,3-propanetricarboxylate (salt)	17863-38-6	No data.	No data.	No data.	No data.
5. Copper(II) sulfate pentahydrate	7758-99-8	No data.	No data.	No data.	No data.

3. Hazards Identification

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: Not known. Expected toxicity hazard: slight.

Inhalation

Prolonged exposure to low concentrations of vapors may cause irritation to throat and upper respiratory tract, headache, nausea, dizziness, and even unconsciousness.

Skin Contact

May be harmful if absorbed through the skin.

Eye Contact

Contact with product may cause redness, slight to severe eye irritation.

Ingestion

Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

Recommended Exposure Limits

No occupational exposure limits have been established for this mixture.

Signs and Symptoms Of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Medical Conditions Generally Aggravated By Exposure

No data available.

4. First Aid Measures

Emergency and First Aid Procedures

Victims of severe exposure to chemicals must be taken to health providing centers for medical attention. Always bring with victim a copy of label and SDS of product to health professional.

In Case of Inhalation

Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

In Case of Skin Contact

Wipe off product and immediately wash affected area with abundant soap and water. Remove contaminated clothing taking care not to impregnate eyes. Seek medical attention if irritation occurs. Wash clothing before reuse.

In Case of Eye Contact

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

In Case of Ingestion

Immediately contact a physician or poison control center for treatment advice. Victim should drink milk, egg whites or large quantities of water and be induced to vomiting. Never give anything by mouth to someone who is unconscious, having convulsions or unable to swallow.

Note to Physician

Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: N.A.

Explosive Limits: LEL: N.A. UEL: N.A.

Autoignition Pt: N.A.

Fire Fighting Instructions

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Flammable Properties and Hazards

Toxic fumes may be generated under fire conditions.

Hazardous Combustion Products

None known.

Extinguishing Media

Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

It is necessary to contain the spill into the smallest area possible by diking, scooping, etc., and place liquid into an appropriate container, labeling it accordingly. If product is clean, use it as intended, following original label directions; should it get dirty or contaminated, salvage for proper disposal as waste.

Absorb residual product onto dry carrier such as dirt, sand or any other absorbent material, then put in covered, labeled containers and dispose of as dry waste in accordance with Federal, State and Local waste disposal regulations.

Protective Precautions, Protective Equipment and Emergency Procedures

In case of a large spill, clear the affected area and protect people. Such releases should be responded to by trained personnel using pre-planned procedures.

In the event of an incidental release, minimum Personal Protective Equipment must be worn: latex or rubber gloves and rubber boots, goggles or full face-shield and coveralls or long sleeved shirt and pants. In case of a large spill, protect people by clearing and isolating the affected area.

Environmental Precautions

Do not allow to enter drains or waterways.

7. Handling and Storage

Precautions To Be Taken in Handling

Use with adequate ventilation. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, or clothing. Avoid ingestion and inhalation. Empty containers may contain residual liquid or vapors and therefore should be handled the same as full containers.

Precautions To Be Taken in Storing

Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Keep containers tightly closed when not in use. Store in a cool, dry place, away from direct sunlight, sources of intense heat or where freezing is possible. Store away from food, feed, clothing materials and living quarters. Whenever possible, place chemicals on secondary containers or diked area. Store a maximum of three pails high; do not stack pallets.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Eye Protection

Face shield and safety glasses. Safety glasses. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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.

Other Protective Clothing

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear long sleeve shirt, long pants, and protective shoes with socks.

Engineering Controls (Ventilation etc.)

General ventilation is usually adequate. Local exhaust should be used if needed for safe, comfortable working conditions. An eye bath and washing facilities should be readily available.

Work/Hygienic/Maintenance Practices

Handle in accordance with good industrial hygiene and safety practice. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove all dirty or contaminated clothing and wash it before reusing, as well as any other PPE.

Environmental Exposure Controls

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Freezing Point:	N.E.

Explosive Properties

No data available.

Oxidizing Properties

No data available.

Boiling Point:	N.A.
Decomposition Temperature:	N.E.
Autoignition Pt:	N.A.

Flammability (solid, gas)

Product is non-flammable.

Flash Pt:	N.A.
Specific Gravity (Water = 1):	1.18 - 1.23
Density:	~ 10.1 LB/GA
Vapor Pressure (vs. Air or mm Hg):	N.E.
Vapor Density (vs. Air = 1):	N.E.
Evaporation Rate:	N.E.
Solubility in Water:	Soluble
Percent Volatile:	N.A.
Saturated Vapor Concentration:	N.E.
Viscosity:	N.E.
Octanol/Water Partition Coefficient:	N.E.
pH:	7.5 - 9.5

Appearance and Odor

Dark blue-green color.
No perceptible odor.

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]

Reactivity

N.A.

Conditions To Avoid - Instability

Stable under normal conditions, but avoid extreme heat and contact with incompatible materials.

Incompatibility - Materials To Avoid

Strong oxidizing agents.

Hazardous Decomposition or Byproducts

Hazardous decomposition products formed under fire conditions.

Carbon oxides, nitrogen oxides (NOx), toxic fumes of zinc oxide.

Hazardous Polymerization: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

Mutagenicity: This product has not been investigated for mutagenic effects.
Embryotoxicity: This product has not been investigated for embryotoxic effects.
Teratogenicity: This product has not been investigated for teratogenic effects.
Reproductive Toxicity: This product has not been investigated for toxic reproductive effects.
CAS# 1344-43-0: Manganese oxide:
Acute toxicity, LD50, Subcutaneous, Mouse, 1.000 GM/KG.
Result:
Kidney, Ureter, Bladder:Urine volume increased.
Kidney, Ureter, Bladder:Other changes in urine composition.
Nutritional and Gross Metabolic: Changes in: Sodium.
- Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D.I. Mendeleeva. Journal of the D.I. Mendeleeva All-Union Chemical Society., V/O Mezhdunarodnaya Kniga, 113095, Moscow USSR, Vol/p/yr: 19,186, 1974

CAS# 1314-13-2: Zinc oxide:
Acute toxicity, TCLo, Inhalation, Human, 600.0 MG/M3.
Result:
Lungs, Thorax, or Respiration: Cough.
Lungs, Thorax, or Respiration:Dyspnea.
Lungs, Thorax, or Respiration:Other changes.
- Journal of Industrial Hygiene., For publisher information, see AEHLAU, Cambridge, MA, Vol/p/yr: 9,88, 1927

Acute toxicity, LD50, Oral, Mouse, 7950. MG/KG.
Result:
Kidney, Ureter, Bladder:Urine volume increased.
Nutritional and Gross Metabolic: Changes in: Sodium.
Nutritional and Gross Metabolic:Changes in:K.
- Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 51(4),89, 1986

CAS# 7758-99-8: Copper(II) sulfate pentahydrate:
Acute toxicity, LD50, Oral, Rat, 300.0 MG/KG.
Result:
Behavioral: Altered sleep time (including change in righting reflex).
Behavioral: Change in motor activity (specific assay).
Behavioral: Antipsychotic.
- "Agricultural Chemicals," 1976/77 revision, Thomson, W.T., 4 vols., Thomson Publications, Fresno, CA, Vol/p/yr: 2,182, 1977

Chronic Toxicological Effects

No data available.

Irritation or Corrosion

No data available.

Symptoms related to Toxicological Characteristics

No data available.

Sensitization

The sensitizing properties of this product have not been thoroughly investigated.

Carcinogenicity/Other Information

The carcinogenic properties of this product have not been thoroughly investigated.

Carcinogenicity: NTP? Unknown IARC Monographs? Unknown OSHA Regulated? Unknown

Ingestion or inhalation of a large quantity may cause a feverish reaction and leukocytosis. Diarrhea.

12. Ecological Information

General Ecological Information

No environmental impact studies have been performed with this product. The available data on this plant nutrient material does not indicate any undue hazard to the environment under anticipated use and storage. All work practices must be aimed at preventing environmental contamination. Any waste due to spillage or leakage should be contained and disposed of accordingly, see above under Section 6 "Accidental Release Measures."

Results of PBT and vPvB assessment

No data available.

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

13. Disposal Considerations

Waste Disposal Method

This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority. Dispose of empty container in a sanitary landfill or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Avoid contaminating water by disposal of equipment wash waters or other product wastes.

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. Transport Information

LAND TRANSPORT (Canadian TDG)

TDG Shipping Name	No data available.
UN Number:	1760
Hazard Class:	8 - CORROSIVE
Packing Group:	III

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name	Corrosive liquid, N.O.S. Contains Copper Sulfate ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. Regulated for ground and air transportation in containers of more than 30

gallons (113.6 liters) which reach the threshold limit for Reportable Quantity (RQ) of 10 pounds for cupric sulfate.

For waterway shipping, any size container is regulated.

UN Number: 1760
Hazard Class: 8 - CORROSIVE
Packing Group: III

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name Corrosive liquids, n.o.s. Contains cupric sulfate.
UN Number: 1760
Hazard Class: 8 - CORROSIVE
Packing Group: III
Marine Pollutant: Yes - Serious

Additional Transport Information

Placards / Markings: HAZARD CLASS 9 placard, marine pollutante mark, limited quantity mark if package under 5 liters for waterway shipping

Emergency Response Guide Number: N.A.

Reportable Quantity: 10 pounds cupric sulfate

15. Regulatory Information

Canadian WHMIS Classification

No data available.

Regulatory Information

No data available.

16. Other Information

Company Policy or Disclaimer

Stoller believes the information contained in this Safety Data Sheet is accurate based on the information provided by reputable suppliers of our raw materials. However, Stoller does not guarantee their accuracy or completeness. The information contained herein is furnished without warranty of any kind, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for any particular purpose. Users should consider these data only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Stoller assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of goods and data.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required