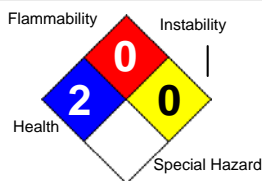


MATERIAL SAFETY DATA SHEET

NEXUS POWER CEREAL



Printed: 02/03/2017
Revision: 06/30/2016

1. Product and Company Identification

Product Code: Z-NEXPCER

Product Name: NEXUS POWER CEREAL

Trade Name: NEXUS POWER CEREAL

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

Revision Date: 06/30/2016

2. Composition/Information on Ingredients

Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TWA	Other Limits
1. Manganous sulfate	10034-96-5	< 2.0 %	No data.	0.2 mg/m ³ as Mn	No data.
2. Cupric sulfate	7758-98-7	< 4.0 %	No data.	No data.	No data.
3. Boric acid	10043-35-3	< 1.0 %	No data.	2 mg/m ³	No data.
4. Potassium hydroxide	1310-58-3	< 6.0 %	No data.	No data.	No data.
5. Zinc chloride	7646-85-7	< 0.5 %	1 mg/m ³	1 mg/m ³	No data.
6. Urea	57-13-6	<15.0 %	No data.	No data.	No data.
7. Phosphoric acid	7664-38-2	<25.0 %	1 mg/m ³	1 mg/m ³	No data.
Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Manganous sulfate	10034-96-5	No data.	No data.	No data.	No data.
2. Cupric sulfate	7758-98-7	No data.	No data.	No data.	No data.
3. Boric acid	10043-35-3	No data.	No data.	6 mg/m ³	No data.
4. Potassium hydroxide	1310-58-3	No data.	No data.	No data.	2 mg/m ³
5. Zinc chloride	7646-85-7	No data.	No data.	2 mg/m ³	No data.
6. Urea	57-13-6	No data.	No data.	No data.	No data.
7. Phosphoric acid	7664-38-2	No data.	No data.	3 mg/m ³	No data.

3. Hazards Identification

Potential Health Effects (Acute and Chronic)

Hazards not otherwise classified (HNOC) or not covered by GHS. Chronic exposures to skin and mucous membranes that cause irritation may cause a chronic dermatitis or mucosal membrane problem.

Inhalation

Inhaling mist, spray, or vapor may cause irritation to upper respiratory tract (nose and throat).

Skin Contact

May cause skin discomfort, irritation, or rash. Harmful if absorbed through broken skin. Prolonged contact may cause more severe symptoms. Large doses may cause liver and kidney damage.

Eye Contact

Causes eye irritation. Eye exposure may cause serious eye irritation, pain, and/or damage to the eye. Contact with product may cause severe irritation and possible irreversible damage.

Ingestion

May cause gastrointestinal irritation, nausea and vomiting.

Recommended Exposure Limits

No occupational exposure limits have been established for this mixture.

Signs and Symptoms Of Exposure

Solution and/or solids may be visible on the skin and/or eyes. Localized redness, warmth, and irritation consistent with mechanism of injury: abrasion, burn, hypertonic solution.

Medical Conditions Generally Aggravated By Exposure

Any skin condition that disrupts the skin, such as abrasions, cuts, psoriasis, fungal infections, etc. Any eye condition that compromises tear production, conjunctiva, or normal corneal homeostasis.

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. Call a physician if no improvement on patient condition.

In Case of Skin Contact

Remove product and immediately wash affected area with soap and water for 15 minutes. Do not apply greases or ointments. Remove contaminated clothing, taking care not to impregnate eyes. Launder contaminated clothing. Seek medical attention if irritation occurs.

In Case of Eye Contact

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

In Case of Ingestion

Immediately call a POISON CENTER or doctor/physician. Wash mouth out with water. Never give anything by mouth to an unconscious person.

Note to Physician

Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: N.E.

Explosive Limits: LEL: N.E. UEL: N.E.

Autoignition Pt: N.E.

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

None known.

Hazardous Combustion Products

None known.

Extinguishing Media

Use water spray, dry chemical, carbon dioxide, or chemical foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

None known.

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.

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. Use only in a well-ventilated area. 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. Store only in shipping container: Bulk material can be stored in polyethylene, aluminum or stainless steel tanks. Keep containers closed and away from oxidizing agents. 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.

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

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 full face-shield when there is any likelihood of splashes.

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.

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, safety shower 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: > 0.00 F (-17.8 C)

Decomposition Temperature: N.E.

Autoignition Pt: N.E.

Flammability (solid, gas)

No data available.

Flash Pt: N.E.

Specific Gravity (Water = 1): ~ 1.24 - 1.28

Density: ~ 10.5 LB/GA

Vapor Pressure (vs. Air or mm Hg): NA

Vapor Density (vs. Air = 1): No data.

Evaporation Rate: No data.

Solubility in Water: 100%

Percent Volatile: N.A.

Saturated Vapor Concentration: N.E.

Viscosity: N.E.

Octanol/Water Partition Coefficient: N.E.

pH: ~ 1

Appearance and Odor

Blue color.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Reactivity

N.A.

Conditions To Avoid - Instability

Stable under normal conditions.

Incompatibility - Materials To Avoid

Strong oxidizing agents.

Hazardous Decomposition or Byproducts

Sulfur dioxide, carbon dioxide.

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

Conditions To Avoid - Hazardous Polymerization

None known.

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# 1310-58-3: Acute toxicity, LD50, Oral, Rat, 273.0 MG/KG. Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. Liver: Tumors. ; Fundamental and Applied Toxicology., Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 8,97, 1987

CAS# 7646-85-7: Acute toxicity, LD50, Oral, Rat, 350.0 MG/KG. Result: Gastrointestinal:Nausea or vomiting. Blood:Change in clotting factors. ; Food Research., For publisher information, see JFDSAZ, Champaign, IL, Vol/p/yr: 7,313, 1942

CAS# 57-13-6: Acute toxicity, LD50, Oral, Rat, 8471. MG/KG. Result: Autonomic Nervous System: Other (direct) parasympathomimetic. Behavioral: Coma. Gastrointestinal:Hypermotility, diarrhea. ; Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 51(6),8, 1986

CAS# 7664-38-2: Acute toxicity, LD50, Oral, Rat, 1530. MG/KG. Result: Behavioral: Somnolence (general depressed activity). Kidney, Ureter, Bladder:Hematuria. Skin and Appendages: Other: Hair. ; BIOFAX Industrial Bio-Test Laboratories, Inc., Data Sheets., Vol/p/yr: 17-4, 1970

Acute toxicity, LD50, Skin, Species: Rabbit, 2740. MG/KG. Result: Behavioral: Somnolence (general depressed activity). Behavioral: Excitement. ; BIOFAX Industrial Bio-Test Laboratories, Inc., Data Sheets., Vol/p/yr: 17-4, 1970

Chronic Toxicological Effects

The toxicological properties of this material have not been fully investigated.

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

Men exposed to manganese dusts showed a decrease in fertility. Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. A stolid mask-like appearance of the face, emotional disturbances such as uncontrollable laughter and a spastic gait with tendency to fall in walking are findings in more advanced cases. High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds. Prolonged or repeated inhalation may cause: Pneumonia.

12. Ecological Information

General Ecological Information

No environmental impact studies have been performed with this product. The available data on the ingredients of this plant nutrient product does not indicate any undue hazard to the environment under anticipated use and storage. Any waste due to spillage or leakage should be contained and disposed of as a Fertilizer (see Section 6 "Accidental Release Measures). Due to its nutrient value, may contribute to eutrophication in bodies of water.

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. 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 Trade Name: NEXUS POWER CEREAL

UN Number: 3082

Hazard Class: 9 - CLASS 9

Packing Group: III

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Trade Name: NEXUS POWER CEREAL

Regulated for ground and air transportation in container of more than 28 gallons (106 liters) which reach the threshold limit for Reportable Quantity (RQ) of 10 pounds for cupric sulfate.

UN Number: 3082

Hazard Class: 9 - CLASS 9

Packing Group: III

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name Trade Name: NEXUS POWER CEREAL

Contains cupric sulfate.

UN Number: |S|

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NEXUS POWER CEREAL

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Hazard Class: 9 - CLASS 9
Packing Group: III
IMDG MFAG Number: |
IMDG EMS Page: |

Additional Transport Information

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

Reportable Quantity: 28 pounds cupric sulfate

Emergency Response Guide Number: N.A.

15. Regulatory Information

Canadian WHMIS Classification

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