

1. Identification

Product identifier	ASP83296 The Andersons Golf Products A-TEP Hi Mag Trace Element Package
Other means of identification	
Product code	221000, 221001, 221003
Recommended use	Fertilizer.
Recommended restrictions	None known.
Manufacturer / Importer / Supplier / Distributor information	
Manufacturer/Supplier	Agrium Advanced Technologies
Address	2405 W. Vassar Road (M-15) Reese, MI. 48757
Contact person	EHS Department
Emergency	Transportation – 1 (800) 792-8311 Medical – 1 (877) 615-0015
Email	ehs@agriumat.com

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Serious eye damage/eye irritation Category 2A Specific target organ toxicity, single exposure (inhalation) Category 2 (Central Nervous System)
OSHA defined hazards	Not classified.
Label elements	



Signal word	Warning
Hazard statement	Causes skin and eye irritation. May cause damage to organs (Central Nervous System) by inhalation.
Precautionary statement	
Prevention	Wash thoroughly after handling. Wear eye protection/face protection. Do not breathe dust. Do not eat, drink or smoke when using this product.
Response	If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Call a POISON CENTER/doctor.
Storage	Store locked up. Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Not classified.
Environmental hazards	Hazardous to the aquatic environment, acute hazard Category 2 Hazardous to the aquatic environment, long-term hazard Category 2

Supplemental information

Hazard symbol



Hazard statement	Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Avoid release to the environment.
Response	Collect spillage.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Magnesium oxide	1309-48-4	14
Ferrous sulfate	7720-78-7	7
Manganese sulfate	7785-87-7	6
Calcium sulfate	7778-18-9	3
Urea	57-13-6	3
Trimanganese tetraoxide	1317-35-7	2
Zinc oxide	1314-13-2	2
Zinc sulfate	7733-02-0	1.45
Dicopper oxide	1317-39-1	1

4. First-aid measures

Inhalation	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Skin contact	Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if symptoms persist.
Ingestion	Seek medical advice.
Most important symptoms/effects, acute and delayed	Causes eye irritation. Central nervous system depression.
Indication of immediate medical attention and special treatment needed	Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do it without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved.
Specific methods	Keep unnecessary personnel away.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid inhalation of dust and contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet.
Methods and materials for containment and cleaning up	Sweep up or vacuum up spillage and collect in suitable container for disposal.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling	Use work methods which minimize dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium sulfate (CAS 7778-18-9)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Magnesium oxide (CAS 1309-48-4)	PEL	15 mg/m3	Total particulate.
Manganese sulfate (CAS 7785-87-7)	Ceiling	5 mg/m3	
Trimanganese tetraoxide (CAS 1317-35-7)	Ceiling	5 mg/m3	
Zinc oxide (CAS 1314-13-2)	PEL	5 mg/m3	Fume.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Calcium sulfate (CAS 7778-18-9)	TWA	10 mg/m3	Inhalable fraction.
Ferrous sulfate (CAS 7720-78-7)	TWA	1 mg/m3	
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Manganese sulfate (CAS 7785-87-7)	TWA	0.2 mg/m3	
Trimanganese tetraoxide (CAS 1317-35-7)	TWA	0.2 mg/m3	
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Components	Type	Value	Form
Zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

Components	Type	Value	Form
Calcium sulfate (CAS 7778-18-9)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Dicopper oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
Ferrous sulfate (CAS 7720-78-7)	TWA	1 mg/m3	
Manganese sulfate (CAS 7785-87-7)	TWA	1 mg/m3	Fume.
Trimanganese tetraoxide (CAS 1317-35-7)	TWA	1 mg/m3	Fume.
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

US NIOSH Pocket Guide to Chemical Hazards: Short Term Exposure Limit (STEL)

Components	Type	Value	Form
Manganese sulfate (CAS 7785-87-7)	STEL	3 mg/m3	Fume.
Trimanganese tetraoxide (CAS 1317-35-7)	STEL	3 mg/m3	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Urea (CAS 57-13-6)	TWA	10 mg/m3	Total particulate.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Provide adequate ventilation.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Chemical resistant gloves are recommended.
Other	Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact chemical protective clothing manufacturer for specific information.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.
Thermal hazards	Not applicable.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Granular.
Physical state	Solid.
Form	Granular.
Color	Gray.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Non flammable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Humidity. Contact with incompatible materials.

Incompatible materials	Strong oxidizing substances.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Dust may irritate respiratory system.
Skin contact	Dust may irritate skin.
Eye contact	Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics
Causes eye irritation. Central nervous system depression.

Information on toxicological effects

Acute toxicity Causes serious eye irritation.

Components	Species	Test Results
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Ferrous sulfate (CAS 7720-78-7)

Acute

Oral

LD50

Rat

319 mg/kg

Skin corrosion/irritation Dust may irritate skin.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory sensitization Not classified.

Skin sensitization Not a skin sensitizer.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure May cause damage to organs (Central Nervous System) by inhalation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Ferrous sulfate (CAS 7720-78-7)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna)
Fish	LC50	Carp (Cyprinus carpio)
		6.15 - 9.26 mg/l, 48 hours
		0.56 mg/l, 96 hours
Manganese sulfate (CAS 7785-87-7)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna)
Fish	LC50	Fathead minnow (Pimephales promelas)
		7.09 - 9.36 mg/l, 48 hours
		24.3 - 38.9 mg/l, 96 hours
Zinc oxide (CAS 1314-13-2)		
Aquatic		
Crustacea	LC50	Water flea (Daphnia magna)
		0.098 mg/l, 48 Hours
Zinc sulfate (CAS 7733-02-0)		
Aquatic		
Crustacea	EC50	Rotifer (Philodina acuticornis)
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)
		0.3 mg/l, 48 hours
		0.162 mg/l, 96 hours

Persistence and degradability None known.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Urea (CAS 57-13-6)

-2.11

Mobility in soil No data available.**Mobility in general** No data available.**Other adverse effects** Not available.**13. Disposal considerations****Disposal instructions** Dispose in accordance with all applicable regulations.**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.**Waste from residues / unused products** Dispose in accordance with all applicable regulations.**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after container is emptied.**14. Transport information****DOT****UN number** UN3077**UN proper shipping name** Environmentally hazardous substances, solid, n.o.s. (Zinc oxide)**Transport hazard class(es)** 9**Subsidiary class(es)** -**Packing group** III**Special precautions for user** Not available.**Special provisions** 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33**Packaging exceptions** 155**Packaging non bulk** 213**Packaging bulk** 240**IATA****UN number** UN3077**UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (Zinc oxide)**Transport hazard class(es)** 9**Subsidiary class(es)** -**Packaging group** III**Environmental hazards** Yes**Labels required** 3**ERG Code** 9L**Special precautions for user** Read safety instructions, MSDS and emergency procedures before handling.**IMDG****UN number** UN3077**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)**Transport hazard class(es)** 9**Subsidiary class(es)** -**Packaging group** III**Environmental hazards****Marine pollutant** Yes**Labels required** 3**EmS** F-A, S-F**Special precautions for user** Read safety instructions, MSDS and emergency procedures before handling.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This substance/mixture is not intended to be transported in bulk.**15. Regulatory information****US federal regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Dicopper oxide (CAS 1317-39-1) LISTED

Ferrous sulfate (CAS 7720-78-7) LISTED

Manganese sulfate (CAS 7785-87-7) LISTED

Trimanganese tetraoxide (CAS 1317-35-7) LISTED

Zinc oxide (CAS 1314-13-2) LISTED

Zinc sulfate (CAS 7733-02-0)

LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese sulfate (CAS 7785-87-7)
 Trimanganese tetraoxide (CAS 1317-35-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

Calcium sulfate (CAS 7778-18-9)
 Ferrous sulfate (CAS 7720-78-7)
 Magnesium oxide (CAS 1309-48-4)
 Trimanganese tetraoxide (CAS 1317-35-7)
 Zinc oxide (CAS 1314-13-2)
 Zinc sulfate (CAS 7733-02-0)

US. New Jersey Worker and Community Right-to-Know Act

Dicopper oxide (CAS 1317-39-1)	500 lbs
Manganese sulfate (CAS 7785-87-7)	500 lbs
Trimanganese tetraoxide (CAS 1317-35-7)	500 lbs
Zinc oxide (CAS 1314-13-2)	500 lbs
Zinc sulfate (CAS 7733-02-0)	500 lbs

US. Pennsylvania RTK - Hazardous Substances

Calcium sulfate (CAS 7778-18-9)
 Ferrous sulfate (CAS 7720-78-7)
 Magnesium oxide (CAS 1309-48-4)
 Trimanganese tetraoxide (CAS 1317-35-7)
 Zinc oxide (CAS 1314-13-2)
 Zinc sulfate (CAS 7733-02-0)

US. Rhode Island RTK

Dicopper oxide (CAS 1317-39-1)
 Manganese sulfate (CAS 7785-87-7)
 Trimanganese tetraoxide (CAS 1317-35-7)
 Zinc oxide (CAS 1314-13-2)
 Zinc sulfate (CAS 7733-02-0)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 28-June-2013

Revision date -

Version # 01

NFPA Ratings



References

C&L Inventory database.
Registry of Toxic Effects of Chemical Substances (RTECS)
HSDB® - Hazardous Substances Data Bank

Disclaimer

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