



SAFETY DATA SHEET

Version: 2.0

Date: 20.Nov.2017


Supersedes: 1.0

Availa® Se 4%

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: Product Name	Availa® Se 4% Zinc L-Selenomethionine - Livestock nutritional feed ingredient.
1.2 Recommended use of the chemical and restrictions: Identified Use(s) Uses Advised Against	A nutritional animal feed ingredient. For use only as an animal feed additive.
1.3 Supplier's details Company Identification	Zinpro Corporation 10400 Viking Drive, Suite 240 Eden Prairie, MN 55344-7265
Telephone E-Mail (competent person)	952-944-2736 zinpro@zinpro.com
1.4 Emergency Phone No. (Spill, Leak, Fire, Exposure, or Accident): Languages spoken	CHEMTREC 1-800-424-9300 (US and Canada) 1-703-527-3887 (collect calls accepted) Reference CCN 725293 24 hours, English spoken.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Hazard Classification:	Acute Oral Toxicity, Category 4 (mixture containing selenium)
2.2 Labelling: Symbol	
Signal word	Warning
Hazard statements:	Harmful if swallowed at packaged concentration. Follow all feeding instructions.
Precautionary Statements:	Wash hands thoroughly after handling this product. Do not eat, drink, or smoke when using this product. Call a Poison Center or seek medical advice if you feel unwell.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures Substances in preparations / mixtures			
<u>Ingredient</u>	<u>CAS No</u>	<u>% Wt</u>	<u>EPCRA 313</u>
Zinc L-Selenomethionine	None	14.4% (as complex) 4.0% (as Se) 3.4% (as Zn)	No Yes Yes
Silicon Dioxide, Amorphous	7631-86-9	85.6%	No

SECTION 4: FIRST AID MEASURES

Avoid contact with all workplace chemicals.

4.1 Description of first aid measures

SKIN:	After contact with skin, wash immediately with plenty of water.
EYES:	Wash eyes with copious amounts of water. Consult a physician
INGESTION:	Wash mouth and throat repeatedly without swallowing. Do not induce vomiting without medical advice. Consult a physician if you feel unwell.
INHALATION:	Move to fresh air. Provide oxygen or artificial respiration if needed. Consult a physician without delay.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 SUITABLE EXTINGUISHING MEDIA:	Dry chemical, CO ₂ , water spray, or foam as appropriate for surrounding materials.
5.2 COMBUSTION PRODUCTS:	Burning may produce irritant fumes such as metal oxides, or toxic gases such as carbon monoxide.
5.3 FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus in enclosed areas. Do not inhale combustion gases. Do not flush into storm drains.
5.4 UNUSUAL FIRE AND EXPLOSION HAZARDS:	All granular materials have the potential to create a fire hazard if dust is generated during handling.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS:	Use personal protective equipment including gloves and safety glasses or face shield when handling this product. When handling, do not eat, drink, or smoke.
6.2 ENVIRONMENTAL PRECAUTIONS:	Prevent product from entering drains.
6.3 METHODS FOR CLEANING:	Carefully sweep up and recover uncontaminated material for re-use. Scoop remaining waste into suitable, labeled container for disposal.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING AND STORAGE:	Use only in an area provided with adequate ventilation. Use personal protective equipment when handling this product. Remove and wash contaminated clothing before re-use. Store in tightly closed container at room temperature in a dry location.
7.2 OTHER PRECAUTIONS:	ALWAYS minimize the generation of dust when handling. This product contains metal compounds. Do not mix with acids or oxidizers except under controlled conditions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Potential workplace routes of exposure include inadvertent, incidental oral ingestion and inadvertent, incidental dermal contact. Inhalation is not a significant route of exposure.

8.1 Occupational Exposure Limits

Substance	Permissible Exposure Level
Zinc L-Selenomethionine	None listed
Selenium compounds	0.2 mg/m ³ (TWA)
Zinc dust	10.0 mg/m ³ (TWA)
Zinc dust (respirable fraction)	5.0 mg/m ³ (TWA)
Silicon dioxide	6.0 mg/m ³ (TWA)

8.1.1	ENGINEERING CONTROLS:	Use only in a well-ventilated area to prevent exposure from exceeding regulatory levels.
8.1.2	RESPIRATORY PROTECTION:	Protection is needed only when dust is formed. Use a mask suitable for dust. Proper handling to minimize dust is required. Do not smoke when handling this product.
8.1.3	EYE PROTECTION:	Goggles or safety glasses with side-shields.
8.1.4	SKIN PROTECTION:	Gloves
8.1.5	WORK HYGIENIC PRACTICES:	Do not eat or drink when handling this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES:	
	APPEARANCE:	Light blue granular
	ODOR:	Distinctive selenium odor
	PHYSICAL STATE:	Solid
	pH:	N/A
	MELTING POINT:	>200 °C
	SPECIFIC GRAVITY (H₂O=1):	1.1-1.2 at 20°C
	SOLUBILITY IN WATER:	Active product is water soluble, Carrier is insoluble
	PERCENT SOLIDS BY WEIGHT:	100%
	PERCENT VOLATILE:	0%
	VOLATILE ORGANIC CMPDS (VOC):	0%
	FLAMMABLE LIMITS IN AIR UPPER:	N/A
	(% BY VOLUME) LOWER:	N/A
	FLASH POINT:	>200 °C
	AUTOIGNITION TEMPERATURE:	>200 °C

SECTION 10: STABILITY AND REACTIVITY

10.1	STABILITY:	This product is stable under recommended storage conditions and in normal use.
10.2	CONDITIONS TO AVOID (STABILITY):	Avoid generation of dust while handling. As with all dusts, finely divided airborne material may explode or burn when exposed to a source of ignition.
10.3	INCOMPATIBILITY (MATERIALS TO AVOID):	Organic compounds are incompatible with strong acids and strong oxidizers. Potentially violent reactions may occur on mixing with these materials. Selenium & silicon ignite in fluorine gas at ordinary temperatures. Mixtures of carbides or chlorates with selenium react with incandescence. Violent or explosive reactions may result if selenium is mixed with chromium trioxide or silver bromate.
10.4	HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	Thermal decomposition may release irritating gases, such as metal oxides, or toxic gases, such as carbon monoxide.
10.5	HAZARDOUS POLYMERIZATION:	None

SECTION 11: TOXICOLOGICAL INFORMATION

Essential trace minerals are not a health hazard at low concentrations. This product contains one or more nutritionally-significant metals in organic complexes. The ingredients of this mixture have been evaluated in accordance with the Health Hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals.

11.1 Information on toxicological effects

Acute Toxicity: (Not Classified):

Acute toxicity estimate (ATE) for this mixture:	LD50 (oral) =	783 mg/kg
Acute toxicity data for components:		
L-Selenomethionine, (Vinson, et al 1987):	LD50 (oral) =	37.3 mg/kg(Vinson, et al 1987)
Silicon dioxide, amorphous,	LD50 (oral, rat):	>10,000 mg/kg
Zinc,	LD50 (oral, rat):	630 mg/kg

Sub Acute/Chronic Effects associated with mineral components:

Skin Sensitizer:	Not Classified.
Carcinogen:	Not Classified.
Mutagen:	Not Classified.
Skin Irritant:	Not Classified. Contains selenium and zinc at concentrations

Eye Irritant:

less than 10% by weight. May cause skin irritation.
Not Classified. Contains selenium, zinc, and silicon dioxide at concentrations less than 10% by weight. May cause eye irritation.

Reproductive Toxicity:

Not Classified. Contains selenium at a concentration 4% by weight. Adverse reproductive effects have been reported in some animal studies.

Target Organ:

Not Classified.

Aspiration toxicity:

Not Classified.

SYMPTOMS OF OVEREXPOSURE to trace minerals:

Irritation or burning of nose, throat, or skin; stomach cramps, nausea, vomiting, diarrhea, behavior changes, deterioration of motor skills.

11.2 MEDICAL CONDITIONS GENERALLY AGGRAVATED BY OVEREXPOSURE:

Asthma or other respiratory problems, existing dermatitis

SECTION 12: ECOLOGICAL INFORMATION

This product contains zinc, selenium, and silicon dioxide, all of which are materials that occur naturally throughout the environment, in rocks, soil, and water. Zinc and selenium are essential elements in plants and animals. Inorganic zinc compounds have been used as pesticides, most commonly as an herbicide. Amorphous silicon dioxide is used as an insecticide. These uses illustrate that targeted ecological effects of such materials do occur. There is no data regarding the actual eco-toxicity of the metal-amino acid compound in this product, which is formulated and approved for ingestion by livestock.

SECTION 13: DISPOSAL CONSIDERATIONS

Wastes containing selenium are hazardous waste in accordance with 40 CFR Part 261 if testing by the Toxic Characteristic Leaching Procedure (TCLP) results in a selenium concentration of 1.0 mg/L or more. This product may be a hazardous waste when disposed because the concentration of selenium as supplied exceeds 0.002%, the Total Selenium threshold at which the TCLP limit cannot be exceeded. It is the responsibility of the generator to identify and properly dispose of all wastes.

SECTION 14: TRANSPORT INFORMATION

This product is not listed or categorized as a hazardous material for transport in the U.S. at 49 CFR 172.101.

SECTION 15: REGULATORY INFORMATION

Mineral-amino acid complexes are not specifically regulated under any of the listed programs. The metallic component as a free metal or as a metal compound, and other ingredients, are regulated as follows:

15.1. U.S. FEDERAL REGULATIONS

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|--|---|
| 15.1.1 TSCA (TOXIC SUBSTANCE CONTROL ACT) listed: | Selenium and selenium compounds |
| 15.1.2 CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): | Selenium particles <0.004 in diameter RQ 100 lb |
| 15.1.3 EPCRA (EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT): | |
| 302 EXTREMELY HAZARDOUS SUBSTANCE TPQ: | Not EHS |
| 304 EXTREMELY HAZARDOUS SUBSTANCE RQ: | Not EHS |
| 311/312 HAZARD CATEGORIES: | Acute: No Chronic: Yes Fire: No Pressure: No Reactivity: No |
| 313 REPORTABLE INGREDIENTS: | None. Selenium compounds N725 are <1% by weight |
| 15.1.4 CLEAN AIR ACT AMENDMENTS Section 112: | Selenium may be subject to regulation as a Hazardous Air Pollutant if emitted to the air. |
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| 15.2 U.S. FEDERAL REGULATIONS | |
| 15.2.1 TSCA (TOXIC SUBSTANCE CONTROL ACT) listed: | Zinc and zinc compounds |
| 15.2.2 CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): | No RQ is assigned, although the class is a CERCLA hazardous substance. |
| 15.2.3 EPCRA (EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT): | |
| 302 EXTREMELY HAZARDOUS SUBSTANCE TPQ: | Not EHS |
| 304 EXTREMELY HAZARDOUS SUBSTANCE RQ: | Not EHS |
| 311/312 HAZARD CATEGORIES: | Acute: No Chronic: No Fire: No Pressure: No Reactivity: No |
| 313 REPORTABLE INGREDIENTS: | None. Zinc cmpds N987 are <1.0% by weight |
| 15.2.4 CLEAN AIR ACT AMENDMENTS Section 112: | Not listed as Hazardous Air Pollutant in Section 112 of the CAAA. |

- 15.3 U.S. FEDERAL REGULATIONS**
- 15.3.1 TSCA (TOXIC SUBSTANCE CONTROL ACT) listed:** Silicon Dioxide, Amorphous (Silica)
- 15.3.2 CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):** Not listed
- 15.3.3 EPCRA (EMERGENCY PLANNING AND COMMUNITY RIGHT-TO- KNOW ACT):**
- 302 EXTREMELY HAZARDOUS SUBSTANCE TPQ:** Not EHS
- 304 EXTREMELY HAZARDOUS SUBSTANCE RQ:** Not EHS
- 311/312 HAZARD CATEGORIES:** **Acute: No Chronic: Yes Fire: No Pressure: No Reactivity: No**
- 313 REPORTABLE INGREDIENTS:** Not listed in Section 313.
- 15.3.4 CLEAN AIR ACT AMENDMENTS Section 112:** Not listed as Hazardous Air Pollutant in Section 112 of the CAAA.
- 15.5 STATE REGULATIONS:** Refer to individual state agency for information.
- 15.6 INTERNATIONAL REGULATIONS:** Refer to European Chemical Substance Information System (ESIS)
Refer to Australian Hazardous Substance Information System (HSIS)

SECTION 16: OTHER INFORMATION

- 16.2 NFPA HAZARD CLASSIFICATION**
- HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0**
- 16.3 HMIS HAZARD CLASSIFICATION:**
- HEALTH: 0 FLAMMABILITY: 1 PHYSICAL: 0 PROTECTION: 1B**
- 16.4 PREPARATION INFORMATION:**
- Centers for Disease Control (CDC) Agency for Toxic Substances and Disease Registry (ATSDR)
- National Fire Protection Association (NFPA)
- Hazardous Materials Information System (HMIS)
- U.S. EPA Chemical Emergency Preparedness and Prevention Office (CEPPO) List of Lists
- U.S. EPA Substance Registry Service (TSCA)
- U.S. Dept of Labor Occupational Safety & Health Administration (OSHA) 29 CFR 1910.1000
- U.S. Dept of Transportation (DOT) 49 CFR 172.101

DISCLAIMER: The information expressed in this document regarding this product is believed to be reliable. However, no guarantee or warranty of any kind, express or implied, concerning the use of this product is intended.