

Material Safety Data Sheet

TIGER MICRONUTRIENTS[®] Onion Mix

Update Nov/09

Emergency Phone numbers:

For shipments coming from Calgary, AB, Canada or Stockton, CA, USA Call collect— 403-279-2616 (8am –4pm, Mon-Fri) or CANTEC 613-996-6666 (24 hours)

For Shipments coming from Atmore, AL, USA Call collect—251-368-2560 (8am– 4pm, Mon-Fri) or Chemtrec 800-424-9300 (24 hours)

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Tiger-Sul Products, LLC

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Section I: Product Identification and Uses

Common Trade Name: TIGER MICRONUTRIENTS[®] Onion Mix

Synonym: Mixture of Zinc, Manganese, Copper and Sulphur

Chemical Family: Zinc Compounds 12%, Manganese Compounds 4%, Copper Compounds 2%, Sulphur 64%, Inert, Ingredients/Filler 17%

Molecular Weights: N/A

Reportable Quantity: None

Marine Pollutant: No

US and Canadian Shipments: None regulated as per schedule 2 section 33 (b) exemption for sulphur

International Shipments:

AIR(IATA): Exempted under special provision A 105 SEA (IMGD): Exempted as per sulphur observations part 1 & 2

Appearance: Specifically formed product in the shape of pastilles.

Section II: Hazardous Ingredients (Mixtures Only)

Emergency Overview

* This Product is a stable solid. It's light black appearance with no appreciable odor. The product may cause irritation to the skin after prolonged contact. This product should be stored and handled to prevent the possibility of inhalation, eye contact, and prolonged skin contact.

Notice: the data and information presented herein are based upon tests, research and reports which are considered by us to be reliable and accurate. The data and information is presented without warranty, guarantee or liability on our part, and are presented to the customer for his/her own consideration, investigation and verification.

Section III: Hazardous Ingredients

Name	CAS No.	Concentration
Zinc Compounds	1314-13-2	12%
Manganese compounds	1344-43-0	4%
Copper Compounds	1317-38-0	2%
Sulphur	7704-34-9	64%
Inert Ingredients/Filler		17%

Section IV: Physical Data
Boiling Point: 444°C (832°F)
Melting Point: 119°C (246°F)
Vapor Density (Air =1): N/A
Solubility in Water (% by weight): Insoluble
Physical State and Appearance: Charcoal gray (Pellet or pastille in shape)
Odor threshold: slight sulphur odor
Specific Gravity: 5.6 gm/ml
Vapor Pressure (mm Hg at 20°C): N/A
Volatiles by Volume: N/A
Evaporation Rate (Butyl Acetate=) (Ether=): N/A
PH: Neutral when dry

Section V. Fire and Explosion Data
This Product is: Not Combustible
Flash Points: Pure liquid S- 190°C (dust clouds), 220°C (Non—dispersed dust)
Flammable Limits: LEL 35 gm/m ³ UEL 1400 gm/m ³ (dust)
Basic Firefighting Procedures: * Fire Extinguishing Agents Recommendations <ol style="list-style-type: none"> 1. A fine water spray or fog is recommended 2. CO₂ or dry chemical 3. Small fires may be smothered with sand or soil sulphur
*Fire Extinguishing Agents to AVOID—Hoses and extinguishers with pressure streams should be avoided where solid sulphur is dusty or where it may create a further hazard by raising more dust clouds
*Special Fire Fighting Precautions: because burning sulphur evolves sulphur dioxide, breather apparatus or gas masks approved for use in acid-gas atmosphere should be used. Fumes from unprotected sulphur fires shall be avoided, if possible, by approaching for the upwind side.
Fire degradation products: Combustion may produce sulphur dioxide
Flammability: Condition to avoid: Heat, sparks, open flame, static electricity or any other potential ignition source should be avoided. Avoid contact with incompatible materials.
Unusual fire and explosion hazards: Dust suspended in air is readily ignited by flames, static electricity or friction spark. Every reasonable step must be taken to minimize dust formation. Dust tight castings should be equipped with explosion relief vents. Sparkles electrical equipment is recommended. Handling equipment must be grounded or bonded to avoid static electricity. Keep away from source of flame or sparks. Detailed recommendations in Manufacturing Chemists Association SD-74 and National Safety Council 612 Bulletins covering “Sulphur” should be followed when handling TIGER MICRONUTRIENTS® Onion Mix .

Section VI: Reactivity Information
Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to avoid: The main hazards are fire and dust explosions
Hazardous Polymerization: Will not occur
Hazardous Decomposition Products: None
Chemical Incompatibility: None

Section VII: Health Hazard Information & technology of Components
<p>Primary Routes of Entry: Inhalation: Sulphur dust may irritate the mucous membranes of the respiratory passage Ingestions: Minimal toxicity, Irritating to mouth, throat and stomach. May cause digestive tract disorder/damage. Skin: Frequent or prolonged contact may irritate the skin. Low toxicity Eyes: sulphur dust is capable of irritating the inner surfaces of the eyelids. Permissible Concentration: None Established</p>
<p>Toxicological Information: Unusual Chronic Toxicity: N/A</p>

Section VIII: First Aid
<p>Eye Contact: Irrigate thoroughly with copious quantities plain water</p>
<p>Skin Contact: Wash with mild soap and water</p>
<p>Ingestion: If swallowed, induce vomiting only if victim is conscious. DO NOT attempt to give anything by mouth to an unconscious person.</p>
<p>* After first aid get appropriate in-plant, paramedic, or community medical support.</p>

Section IX: Precautionary Measures:
<p>Respiratory Protection: Seek professional advice prior to respirator selection and use, and if necessary, wear a MSHA/NIOSH– approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen.</p>
<p>Eye & Face Protection: Dust-tight goggles with plastic or rubber frames may be helpful in dusty conditions. Wear protective eyeglasses or chemical safety glasses. Contact lenses are not protective devices. Appropriate eye protection must be worn, or in conjunction with contact lenses.</p>
<p>Hands, Arms and Body Protection: Workers whose skin may be sensitive to sulphur dust should button collars, roll sleeves down, and gather trousers at the ankle. Gloves may be helpful.</p>
<p>Other Clothing and Equipment: Hard hat and safety shoes. Fire-retardant fabrics is recommended. Sulphur impregnated clothing should not be worn.</p>
<p>Storage: Solid becomes corrosive to metals when stored wet. Sulphur fertilizer will physically break down when exposed to moisture or water. Store in a dry location.</p>
<p>Ventilation: Provide general or local exhaust ventilation system to maintain airborne concentrations below OSHA PELs (Sec.2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.</p>
<p>Normal Handling: Avoid breathing dust and keep clothing as free from dust as possible.</p>
<p>Spill or Leak: Shovel into disposal containers to cover with tarp. For landfill disposal, mix with limestone 3 times the weight of sulphur</p>
<p>Special Precautions/Procedures/Label Instructions: Eye wash equipment near the work area.</p>
<p>Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations. This product has been evaluated for RCRA characteristics and should not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal whether the product meets criteria for hazardous waste. This product uses, transformations, mixtures, procedures etc., may render the resulting materials hazardous.</p>
<p>Disposal Regulatory Requirements: Follow applicable federal, state, and local regulations.</p>
<p>Container Cleaning and Disposal: Wipe container clean</p>

Disclaimer: Tiger-Sul Products recommends that all exposures to this product be minimized by strictly adhering to recommendation occupational controls procedures to avoid adverse effects.