



# Safety Data Sheet

## Bio4®

### SECTION 1: Product and Company Identification

Product name: Bio4®  
Product code: 291002  
Product use: Animal feed additive  
Product type: Solid / powder / granule  
Manufacturer: JH Biotech, Inc.  
4951 Olivas Park Drive, Ventura, CA 93003  
Tel: (805) 650-8933 Fax: (805) 650-8942  
[info@jhbiotech.com](mailto:info@jhbiotech.com)  
24-Hour Emergency tel: (800) 633-8253 (United States & Canada) (801) 629-0667 (International)

### SECTION 2: Hazards Identification

Signal word: None  
Label element: None  
Hazard statement: Not hazardous  
Precautionary statement: Avoid breathing dust. Avoid contact with eyes. Wash hands thoroughly after handling.  
First Aid: If inhaled: Remove from source of exposure. If in eyes: Remove contact lenses if present. Wash thoroughly with water for several minutes.  
Storage & Disposal: Store in a safe manner. Dispose product/container in accordance with federal, state, and local regulations.

### SECTION 3: Composition/Information on Ingredients

Component	CAS No.	%	Component	CAS No.	%
Cobalt methionine	n/a	n/a	Manganese methionine	n/a	n/a
Copper methionine	13985-65-4	n/a	Zinc methionine	56329-42-1	n/a

The specific identity and/or exact percentage of composition is not provided because it is a trade secret. Product is not considered hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

### SECTION 4: First Aid Measures

Inhalation: Remove from source of exposure. Get medical attention if necessary.  
Skin contact: Wash thoroughly with water. Get medical attention if necessary.  
Eye contact: Wash eyes with plenty of water for at least 15 minutes. Be sure to remove contact lenses. Get medical attention if necessary.  
Ingestion: Wash out mouth with plenty of water. Do not induce vomiting. Get medical attention if necessary.

### SECTION 5: Firefighting Measures

#### Suitable extinguishing media

Water spray, dry chemical, carbon dioxide, foam

#### Special hazards arising from the substance or mixture

None

#### Protection for firefighters

Wear protective clothing and equipment

### SECTION 6: Accidental Release Measures

#### Personal precautions, protective equipment and emergency procedures

Wear protective clothing, gloves, and safety eye goggles.

#### Environmental precautions

Avoid discharge into environment

#### Methods and material for containment and cleaning up

Contain all spills and leaks to prevent discharge into the environment. Use appropriate tools to transfer spill material to proper disposal container. Or recover material and use it for its intended purpose.

### SECTION 7: Handling and Storage

#### Precautions for safe handling

Avoid overheating or freezing



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### Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area away from direct sunlight. Keep containers tightly closed when not in use.

### SECTION 8: Exposure Controls/Personal Protection

#### Exposure controls

Avoid inhaling dusts or vapors. Practice good industrial hygiene and safety.

	OSHA PEL (8 hr TWA)	NIOSH REL (10 hr TWA)	ACGIH Threshold Limit Value (8 hr TWA)
Cobalt dust	0.1 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>
Copper dust	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Manganese compound	5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup> STEL	0.02 mg/m <sup>3</sup> (resp)
Zinc dust	n/a	n/a	n/a
Nuisance dust (total)	15 mg/m <sup>3</sup>	n/a	n/a
Nuisance dust (resp)	5 mg/m <sup>3</sup>	n/a	n/a

#### Personal protection

Eye protection: Eye protection is not required. To avoid contact with eyes, use safety eye goggles.  
 Skin protection: Wear protective clothing as necessary to minimize contact. Use chemical resistant gloves.  
 Respiratory protection: Not required. Wear approved respiratory equipment if necessary.

### SECTION 9: Physical and Chemical Properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Green, brown color	<b>Vapor pressure</b>	Not applicable
<b>Odor</b>	Slight odor	<b>Vapor density</b>	Not applicable
<b>pH</b>	4 – 5	<b>Relative density</b>	1.02 g/ml
<b>Physical state</b>	Solid	<b>Solubility</b>	Not soluble in water
<b>Melting point / Freezing point</b>	>100°C/212°F	<b>Partition coefficient</b>	Not applicable
<b>Boiling point</b>	Not applicable	<b>Auto-ignition temperature</b>	Not applicable
<b>Flash point</b>	Not applicable	<b>Decomposition temperature</b>	Not applicable
<b>Evaporation rate</b>	Not applicable	<b>Viscosity</b>	Slightly viscous
<b>Flammability</b>	Non-flammable	<b>Explosive properties</b>	Non-explosive
<b>Explosive limits</b>	Not applicable	<b>Oxidizing properties</b>	Non-oxidizer

### SECTION 10: Stability and Reactivity

#### Reactivity

None

#### Chemical stability

Product is stable.

#### Possibility of hazardous reactions

Under normal conditions, hazardous reaction will not occur.

#### Conditions to avoid

Avoid heat

#### Incompatible materials

None

#### Hazardous decomposition products

No known hazardous decomposition products.

### SECTION 11: Toxicological Information

#### Information on toxicological effects

Acute toxicity: May be harmful if swallowed  
 Irritation: May cause eye or respiratory irritation  
 Corrosivity: Not known to be corrosive  
 Sensitization: Not known to cause sensitization  
 Dose toxicity: Not known to be toxic



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Carcinogenicity: This product is not specifically known to be carcinogenic but does contain cobalt. Cobalt and cobalt compounds have been determined by IARC and ACGIH to be possibly carcinogenic.  
Mutagenicity: Not known to be mutagenic  
Reproductive toxicity: Not known to cause reproductive harm

### SECTION 12: Ecological Information

#### Ecotoxicity

Not considered hazardous.

#### Persistence and degradability

Biodegradable

#### Bioaccumulative potential

Not available

#### Mobility in soil

None

### SECTION 13: Disposal Considerations

#### Waste treatment methods

Not hazardous waste. Dispose of product in accordance with federal, state, and local regulations. Consult with qualified representative for proper disposal or treatment.

### SECTION 14: Transport Information

#### DOT

Not regulated by U.S. DOT as hazardous material.

UN number: Not applicable

UN proper shipping name: Not applicable

Transport hazard class(es): Not applicable

Packing group: Not applicable

Environmental hazards: Not applicable

Special precautions for user: Not applicable

#### IATA

Not dangerous goods

#### IMDG

Not dangerous goods

### SECTION 15: Regulatory Information

#### CERCLA

This product contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Cobalt substance

#### California Prop 65

This product does contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Cobalt substance

#### SARA 311/312 Hazards

Acute Health Hazard: No

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: No

#### SARA 313

Cobalt substances are subject to reporting levels established by SARA Title III, Section 313.

Zinc compounds are subject to reporting levels established by SARA Title III, Section 313.



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**Subject to “Right-To-Know” legislation in the following states**

This product contains one or more substances subject to Right To Know.

Massachusetts:  
Zinc compounds

New Jersey:  
Zinc compounds

Pennsylvania:  
Zinc compounds

<b>SECTION 16: Other Information</b>
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