



Safety Data Sheet

Z-MAN™

Number: SDS-049
Revision: 5

SECTION 1: PRODUCT AND COMPANY INFORMATION

Manufacturer	Biofeed Solutions, Inc., PO Box 3434, Glendale, AZ 85311		
Telephone	623-930-7510	Fax	623-930-8598
Product Name(s)	Z-MAN™	Product ID #	Not Applicable
Chemical Family	Fertilizer/Plant Nutrient	CAS Number	Mixture
Emergency Contact / Number	623-930-7510		

SECTION 2: HAZARD IDENTIFICATION

Hazards Not Classified
Signal Word Not Applicable
Precautionary Statements Not Applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Material does not meet the criteria of a substance.

Mixture of substances listed below:

	CAS#	EC#	Component Range
Ferrous Sulfate Monohydrate 30%	17375-41-6	605-688-1	4.0% – 5.0%
Manganese Sulfate Monohydrate	10034-96-5	232-089-9	4.0% – 5.0%
Zinc Sulfate Monohydrate	7446-19-7	231-793-3	4.0% – 5.0%
Organic matter and other plant beneficial materials	—	—	65% – 85%

SECTION 4: FIRST AID MEASURES

Eye Contact

Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact

Wash exposed area with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation and persists. Wash clothing before reuse. Discard items which cannot be decontaminated such as shoes, belts or watchbands.

Ingestion

Do not induce vomiting due to possibility of aspiration into lungs. Drink one quart/liter of water to dilute. Seek medical advice or attention if you feel unwell.

Inhalation

Remove affected person from source of exposure. Get medical attention if discomfort persists.

SECTION 5: FIREFIGHTING MEASURES

Suitable Extinguishing Media

Product does not burn. Use water spray, dry chemical, foam or CO₂ as applicable for burning materials. Use a water spray to cool fire-exposed containers, structures and to protect personnel. Exposed firefighters should wear MSHA/NIOSH approved self-contained breathing apparatus with full-face mask and full protective equipment.

Special Firefighting Procedures

Not Applicable

Unusual Firefighting Hazards

Not Applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

See Section 8 for Personal Protection Measures

Personal Precautions

Isolate release area and keep unnecessary people away. Exercise caution regarding personnel safety and exposure.

Environmental Precautions

No special requirements.

Methods for Cleaning Up

Product is biodegradable. Spills can be washed away with water. Large spills, if uncontaminated, can be returned to container for subsequent use.

SECTION 7: HANDLING AND STORAGE

See Section 8 for Personal Protection Measures

Handling

No special precautions are required. Wash hands at end of shift or before eating or using restroom. Wear gloves to avoid prolonged or repeated contact. Use good hygiene practices when handling product, including changing and laundering work clothes after use.

Storage

Keep products in labeled or original container. Store at 50 – 105 °F / 10 – 40 °C. Product may degrade when held at temperatures above 195 °F / 90 °C. Do not transfer into food or drink containers.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limits

Component Name	ACGIH TLV-TWA	OSHA PEL-TWA
Not Applicable		

Engineering Controls

Typically not necessary.

Eye and Face Protection

Not required. Wear glasses or goggles as a safety measure when working with material; use a face shield if splashing is likely.

Skin Protection

Not required. Wear gloves or other protective clothing to avoid prolonged or repeated contact.

Respiratory Protection

Not required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State	Brown liquid	Flash Point	Not Applicable
Specific Gravity (Water=1)	1.3 (10.8 lbs/gal)	Upper Flammability Limits	Not Applicable
Evaporation Rate	Not Determined	Lower Flammability Limits	Not Applicable
pH	2.0 – 3.0	Auto-ignition Temperature	Not Applicable
Solubility in Water	Soluble	Decomposition Temperature	Not Determined
Odor	Humus	Vapor Pressure	9.5 m-bar
Odor Threshold	Not Determined	Vapor Density (Air=1)	Not Determined
Melting/Freezing Point	19 °F / -7 °C	Partition Coefficient (n-octanol/water)	Not Determined
Boiling Range	Not Applicable	Viscosity (cSt , 40 °C)	Not Determined
Initial Boiling Point	220 °F / 105 °C	Critical Temperature	Not Determined

Note: Physical and chemical properties are provided for safety, health and environmental considerations and do not fully represent product specifications. Those should be requested separately.

SECTION 10: STABILITY AND REACTIVITY

Stability

Stable

Conditions to Avoid

High temperature

Hazardous Decomposition / Byproducts

None known

Hazardous Polymerization

Will not occur

Polymerization Conditions to Avoid

Not Applicable

SECTION 11: TOXICOLOGICAL INFORMATION

Eye Contact

May cause redness or mild irritation.

Skin Contact

None

Ingestion

Potential for mild diarrhea or discomfort if over 0.5 oz/10 ml of concentrate ingested.

Inhalation

Not Applicable

Target Organ Effects

None known

Chronic Effects

Any acute symptoms may be aggravated. Refer to Sections 2 and 4 for recommended actions.

Carcinogenicity

Not Applicable

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity Not Applicable

Mobility Not Determined

Degradability Not Determined

Bioaccumulation Not Determined

SECTION 13: DISPOSAL CONSIDERATION

Triple rinse when empty for recycling. Always dispose of container in accordance with local, state, and/or federal regulations. Empty containers may contain residues.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA Status	All ingredients are listed on TSCA and DSL.
SARA 311/312 Reporting Categories	None

SECTION 16: OTHER INFORMATION

HMIS Rating 0-0-0

Department Issuing SDS Health and Safety

Condition of Sale:

The information herein is believed to be accurate and reliable. Buyer and user assume all liability from use of this material. Follow label directions carefully. Timing, method of application, weather, plant, crop or turf conditions and other factors are beyond the control of the seller.