

Material Safety Data Sheet

Origin MAX-IN for Beans

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Origin MAX-IN for Beans

TRADE NAMES: None

SYNONYMS: Boron, iron, manganese, molybdenum and zinc (in complexed form)

CHEMICAL FAMILY: Metals

MSDS CREATION DATE: February, 2004

MSDS CURRENT REVISION DATE: 05/13/08

DISTRIBUTED BY: Winfield Solutions, LLC, PO Box 64589, St. Paul, Minnesota 55164-0589

EMERGENCY: CHEMTREC (24 Hour Emergency Response) 1-800-424-9300

MEDICAL EMERGENCY: 1-877-424-7452

Section 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	% wt
Boron (in complexed form)	7440-42-8	0.2
Iron (in complexed form)	7439-89-6	0.3
Manganese (in complexed form)	7439-96-5	3.2
Molybdenum (in complexed form)	7439-98-7	0.01
Zinc (in complexed form)	7440-66-6	2.1
Proprietary Ingredients		0 to 25%
Water	7732-18-5	Balance

Section 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Light yellow-green liquid, slight organic odor that can irritate the eyes or skin. May be harmful if swallowed. **NFPA Rating:** Health = 2, Fire = 0, Reactivity = 0

POTENTIAL HEALTH EFFECTS:

INHALATION: Product mists cause irritation of the nasal membranes and upper respiratory tract. Prolonged inhalation of product mist may cause toxic affects to the lungs.

SKIN CONTACT: May cause irritation.

EYE CONTACT: Contact can cause irritation.

INGESTION: May irritate the digestive tract. May be toxic if taken in large quantities.

LONG-TERM AND/OR DELAYED EFFECTS: Long-term inhalation of metallic manganese has resulted in toxic affects to the lungs. Continued and prolonged overexposure to zinc may result in digestive disorders, kidney and/or liver damage.

CARCINOGEN STATUS:

OSHA: Not listed **NTP:** Not listed **IARC:** Not listed

Section 4 – FIRST AID MEASURES

INHALATION: Remove from exposure area to fresh air immediately. Get medical attention for irritation or any other symptom.

SKIN CONTACT: Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and rinse with water. Get medical assistance for irritation or any other symptom.

EYE CONTACT: Flush eyes immediately with large amounts of water (approximately 15-20 minutes). Get medical attention for irritation.

INGESTION: Dilute the product immediately with large amounts of water or milk. Do not induce vomiting unless directed to do so by a doctor or other medical professional. If vomiting occurs, keep head lower than hips to prevent introduction of fluid into the lungs. Get medical attention immediately.

NOTE TO PHYSICIAN: Treat symptomatically.

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Section 5 – FIRE-FIGHTING MEASURES

FLASH POINT: None

AUTOIGNITION TEMPERATURE: Not determined

FIRE AND EXPLOSION HAZARD: No special hazard anticipated.

EXTINGUISHING MEDIA: Use any standard agent suitable for surrounding structural fire or for other chemicals that may be involved.

FIREFIGHTING: Wear appropriate self-contained positive pressure breathing apparatus. Dike area to prevent runoff and contamination of water sources.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition may include carbon dioxide, carbon monoxide and oxides of zinc. Airborne manganese may also be present (harmful to respiratory system).

Section 6 – ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL: Absorb small spills with sand or another absorbent. Dike larger spills and pump into containers for reuse and/or disposal. Do not allow product and/or runoff to enter sewers or waterways.

Section 7 – HANDLING AND STORAGE

STORAGE: Store in a cool, dry place. Protect containers from physical damage.

NORMAL HANDLING: Avoid contact with skin and eyes. Do not breath product mists. Wash thoroughly after handling.

Section 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

INGREDIENT	OSHA PEL	ACGIH TLV	Other values
Manganese	5 mg/m ³ (ceiling value for metallic fume)	0.2 mg/m ³	None
Molybdenum	5 mg/m ³	5 mg/m ³	None

* = ACGIH Biological Exposure Value ** = AIHA Workplace Environmental Exposure Level

VENTILATION: Not normally required.

EYE PROTECTION: Wear safety glasses. Use of splash shields or safety goggles is recommended if product mists are generated.

CLOTHING: Wear trousers and long sleeved shirt to avoid skin contact.

GLOVES: Wear rubber or other impervious gloves to prevent contact with this product.

RESPIRATOR: If product mists may be generated, use a NIOSH approved organic mist air-purifying respirator.

EMERGENCY WASH FACILITIES: Where there is the potential that an employee's eyes and/or skin may be exposed to this product, the employer should provide an eye wash fountain and safety shower or another source of running water within the immediate work area.

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Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Light yellow-green liquid, slight organic odor

MOLECULAR FORMULA: Mixture

MOLECULAR WEIGHT: Mixture

pH: 2 to 3

MELTING POINT: Not applicable

BOILING POINT: Not determined

VAPOR PRESSURE: Same as water

VAPOR DENSITY: Same as water

WATER SOLUBILITY: Miscible

SOLVENT SOLUBILITY: Not determined

SPECIFIC GRAVITY: ~ 1.26, 10.5 lbs per gallon

Section 10 – STABILITY AND REACTIVITY

REACTIVITY: Stable under normal temperatures and pressures.

CONDITIONS TO AVOID: Avoid contact with strong oxidizers and/or excessive heat. Do not allow spilled material to contaminate water sources.

INCOMPATIBILITIES: None anticipated.

HAZARDOUS DECOMPOSITION: Thermal decomposition may include carbon dioxide, carbon monoxide and oxides of zinc. Airborne manganese may also be present (harmful to respiratory system).

POLYMERIZATION: Has not been reported to occur under normal temperatures and pressures.

Section 11 – TOXICOLOGICAL INFORMATION

LD₅₀ Oral, mouse: 9,000 mg/kg (manganese)

Section 12 – ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: No data available

DEGRADABILITY: No data available

LOG BIOCONCENTRATION FACTOR (BCF): No data available

LOG OCTANOL/WATER PARTITION COEFFICIENT: No data available

Section 13 – DISPOSAL CONSIDERATIONS

Product (as shipped) is not a RCRA hazardous waste if discarded. Observe all federal, state and local regulations when disposing of this product.

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Section 14 - TRANSPORT INFORMATION

This product is not regulated in surface transportation in non-bulk quantities. The information below is for shipment exceeding 16,180 pounds in a single package, container, truck or railcar.

US DOT SHIPPING NAME: Environmentally hazardous substances, liquid, n.o.s. (zinc nitrate), 9, UN 3082, PG III, RQ
Reportable Quantity: ~ 16,180 pounds as formulated based upon RQ for zinc nitrate of 1,000 pounds.

Section 15 – REGULATORY INFORMATION

TSCA STATUS: All ingredients are listed on the TSCA Inventory of Chemical Substances and/or are in compliance with the TSCA chemical inventory and premanufacturing regulations.

OTHER TSCA ISSUES: None

SARA 311 CLASSIFICATION: Acute hazard.

SARA 313 NOTIFICATION: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of The Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Manganese Compounds 9 to 13 percent by weight and Zinc Compounds 5 to 7 percent by weight.

CERCLA RQs and TPQs: Zinc: RQ = 1,000 lbs.

CALIFORNIA PROPOSITION 65: No ingredients found on the Propositions 65 list.

CANADIAN INVENTORY: Not determined. Fertilizer products are regulated under the Fertilizers Act.

WHMIS: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. Classification: D2B

Section 16 – ADDITIONAL INFORMATION

CHANGES FROM PREVIOUS VERSION: New MSDS

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.