1. Identification

Product identifier: MegAleX

Other means of identification:
- **Product code:** 32066

Recommended use: Agricultural/ Horticultural Use- Micronutrient Fertilizer- Refer to product label.

Recommended restrictions: Refer to product label.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer:
- **Manufactured for:** Innovation Hammer, L.L.C dba Brandt iHammer
  - **Address:** 479 Village Park Drive
    Powell, OH 43065
    United States
  - **Telephone:** 614-885-4769
  - **Website:** www.BrandtiHammer.co
- **Manufactured by:** Brandt Consolidated, Inc.
  - **Address:** 2935 South Koke Mill Road
    Springfield, IL 62711
    United States
  - **Telephone:** 1-217-547-5840
  - **Website:** www.brandt.co
  - **Email:** msds@brandt.co
  - **Contact Person:** EH&S/Regulatory Department
  - **Emergency:** CHEMTREC (24 Hours):
    - **US, Canada, Puerto Rico:** 1 (800) 424-3900
    - **Virgin Islands:** 1 (800) 424-3900
    - **International:** +1 (703) 527-3887

2. Hazard(s) Identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

- **Hazard symbol:** None.
- **Signal word:** None.
- **Hazard statement:** The mixture does not meet the criteria for classification.

Precautionary statement

- **Prevention:** Observe good industrial hygiene practices.
- **Response:** Wash hands after handling.
- **Storage:** Store away from incompatible materials.
- **Disposal:** Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td></td>
<td>57-13-6</td>
<td>5 - &lt; 10*</td>
</tr>
<tr>
<td>EDTA manganese dipotassium</td>
<td></td>
<td>68015-77-0</td>
<td>&lt; 0.3*</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact**
Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion**
Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**
Direct contact with eyes may cause temporary irritation.

**Indication of immediate medical attention and special treatment needed**
Treat symptomatically.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
No unusual fire or explosion hazards noted.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
Avoid prolonged exposure. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**
Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA manganese dipotassium (CAS 68015-77-0)</td>
<td>Ceiling</td>
<td>5 mg/m3</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA manganese dipotassium (CAS 68015-77-0)</td>
<td>STEL</td>
<td>3 mg/m3</td>
<td>Fume.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m3</td>
<td>Fume.</td>
</tr>
</tbody>
</table>

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea (CAS 57-13-6)</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>Total particulate.</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection not required.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state: Liquid.

Form: Liquid.

Color: Amber to Red

Odor: faint sweet odor

Odor threshold: Not available.

pH: 6 - 8

Salt-Out / Crystallization Temp: < 32 °F (< 0 °C) estimated

Melting point/freezing point: < 32 °F (< 0 °C) estimated

Initial boiling point and boiling range: Not available.

Flash point: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%): Not available.

Flammability limit - upper (%): Not available.

Explosive limit - lower (%): Not available.
Explosive limit - upper (%) Not available.
Vapor pressure 0.00001 hPa estimated
Vapor density Not available.
Relative density 1.05 g/cm³ (typical)
Solubility(ies) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.
Other information
Percent volatile 81.29 % estimated
pH in aqueous solution 6 - 8 (1% solution)
Pounds per gallon 8.8 lb/gal (typical)
Shelf life > 2 years (when stored properly)
VOC (Weight %) 3.3 % estimated

10. Stability and reactivity
Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.
Conditions to avoid Contact with incompatible materials.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
Ingestion Expected to be a low ingestion hazard.
Inhalation Prolonged inhalation may be harmful.
Skin contact No adverse effects due to skin contact are expected.
Eye contact Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
Acute toxicity
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea (CAS 57-13-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Oral</td>
<td>Rat</td>
<td>8471 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Sheep</td>
<td>28500 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization
Respiratory sensitization Not available.
Skin sensitization This product is not expected to cause skin sensitization.
Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not available.

Chronic effects

Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>MegAleX (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia 75977.2734 mg/l, 48 hours estimated</td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urea (CAS 57-13-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna) 3910 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Carp (Leuciscus idus melanotus) &gt; 10000 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guppy (Poecilia reticulata) 16200 - 18300 mg/l, 96 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Harlequinfish, red rasbora (Rasbora heteromorpha) 12000 mg/l, 96 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mozambique tilapia (Tilapia mossambica) 590 - 730 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Not available.

Partition coefficient n-octanol / water (log Kow)

Urea -2.11

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.
15. Regulatory information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
EDTA manganese dipotassium (CAS 68015-77-0) Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
EDTA manganese dipotassium (CAS 68015-77-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
EDTA manganese dipotassium (CAS 68015-77-0)

US. Pennsylvania Worker and Community Right-to-Know Law
Not listed.

US. Rhode Island RTK
EDTA manganese dipotassium (CAS 68015-77-0)

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Material name: MegAleX

Version #: 03  Revision date: 12-29-2015  Issue date: 01-12-2015
<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Issue date</th>
<th>01-12-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>12-29-2015</td>
</tr>
<tr>
<td>Version #</td>
<td>03</td>
</tr>
</tbody>
</table>

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of Manufacturer’s knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the Product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights of others. The information provided in this Safety Data Sheet relates only to the specific Product designated and may not be valid if the Product is used in combination with other materials or in any other process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its owns tests of the Product to determine suitability of the Product for user’s particular use.

Revision Information

Physical & Chemical Properties: Multiple Properties
Transport Information: Agency Name, Packaging Type, and Transport Mode Selection
Other information, including date of preparation or last revision: Disclaimer