



**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Chemical Product

BRANDT CITRIC ZINC 10

Common Name: Zinc citrate complex – Micronutrient fertilizer.  
Chemical Description: Citrate complex solution derived from citric acid and zinc oxide.  
TSCA/CAS No.: This product is a mixture — there is no specific CAS number.

Manufactured For

Brandt Consolidated, Inc.  
2935 So. Koke Mill Road  
Springfield, IL 62711

Emergency Phone Numbers

CHEMTREC (24-Hour Emergency Number): (800) 424-9300  
EPA National Response Center: (800) 424-8802

**SECTION 2. HAZARDOUS INGREDIENTS**

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Water	7732-18-5	49 - 61%	*N.A.	*N.P.
Aqua Ammonia / Ammonium Hydroxide	1336-21-6	7 - 12%	25 mg/m <sup>3</sup>	1,000
Zinc Oxide	1314-13-2	12 - 15%	N.A.	N.P.
Citric Acid, Anhydrous	77-92-9	20 - 24%	15 mg/m <sup>3</sup>	N.P.

\*N.A. – Not available.  
\*N.P. – Not pertinent.

**SECTION 3. EMERGENCY/HAZARDS OVERVIEW**

Clear liquid with slight ammonia odor. Contains ammonia. Can cause burns. Can cause eye and skin irritation. Harmful if ingested or inhaled. Burning may evolve ammonia and oxides of nitrogen. Not D.O.T. regulated.

HEALTH: 2      REACTIVITY: 0      FLAMMABILITY: 0      ENVIRONMENT: 0  
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

**SECTION 4. FIRST AID**

Eyes: Rinse eyes with plenty of running water for at least 15 minutes. Get medical attention if irritation persists.  
Skin: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention if irritation persists.  
Ingestion: If conscious and alert, administer water or milk to dilute, then induce vomiting. Call Poison Control Center or physician immediately. Do not give anything by mouth to an unconscious person.  
Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth and get medical attention.

SECTION 5.	FIRE AND EXPLOSION HAZARDS
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Flash Point:	Does not flash.
Test Method:	Not available.
LEL Flammable Limits:	Not available.
UEL Flammable Limits:	Not available.
Autoignition Temperature:	Not available.
Flammability Classification:	Nonflammable.
Known Hazardous Products of Combustion:	Not known.
Properties that Initiate/Contribute to Intensity of Fire:	Not known.
Potential For Dust Explosion:	None.
Reactions that Release Flammable Gases or Vapors:	Not known.
Potential For Release of Flammable Vapors:	Not known.
Unusual Fire & Explosion Hazards:	None.
Extinguishing Media:	Foam, carbon dioxide, dry chemical, or water fog.
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus and full protective clothing. Avoid smoke inhalation. Contain any liquid runoff.

SECTION 6.	SPILLS AND LEAKS
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Containment:	Prevent product spillage from entering drinking water supplies or streams.
Clean Up:	Collect liquid or absorb onto absorbent material and package for disposal.
Evacuation:	Not necessary.

SECTION 7.	STORAGE AND HANDLING
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Storage:	Store in original container only in a cool, well-ventilated, dry place at temperatures between 40 and 95°F. Do not store near food or feeds. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	Keep out of reach of children. Harmful if swallowed. Avoid breathing spray mists or vapors. Avoid contamination of feed or foodstuffs. After using this product remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water.

SECTION 8.	PERSONAL PROTECTIVE EQUIPMENT
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Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Impervious gloves and clothes.
Respiratory:	Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
Ventilation:	Recommended but no TLV established.

**SECTION 9. PHYSICAL AND CHEMICAL DATA**

Appearance:	Clear liquid.
Odor:	Slight ammonia odor.
pH:	8 - 10
Vapor Pressure:	None.
Vapor Density (Air=1):	Not available.
Boiling Point:	Not available.
Freezing Point:	20°F.
Water Solubility:	Miscible.
Density:	10.2 lbs./gal
Evaporation Rate:	Not determined.
Viscosity:	Not available.
% Volatile:	Not available.
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not available.

**SECTION 10. STABILITY AND REACTIVITY**

Stability:	Stable.
Conditions To Avoid:	Not available.
Incompatibility:	Strong acids.
Hazardous Decomposition Products:	Burning may evolve ammonia and nitrogen oxides. Neutralization reaction will occur if exposed to acidic materials.
Hazardous Polymerization:	Will not occur.

**SECTION 11. POTENTIAL HEALTH EFFECTS**Acute Effects:

Eyes:	May cause eye irritation.
Skin:	May cause slight irritation, especially from prolonged exposure. May cause redness.
Ingestion:	May cause stomach cramps and/or nausea.
Inhalation:	None expected but inhalation may cause irritation of nasal mucous membranes.

Subchronic Effects: None known.

Chronic Effects: None known.

**SECTION 12. ECOLOGICAL INFORMATION**

Algal/Lemna Growth Inhibition:	Not known.
Toxicity to Fish and Invertebrates:	Not known.
Toxicity to Plants:	Not known.
Toxicity in Birds:	Not known.

**SECTION 13. DISPOSAL**

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local waste disposal regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal.

**SECTION 14. TRANSPORTATION**

D.O.T.:	Not D.O.T. Regulated.
Other Shipping Description:	Fertilizing Compounds (Manufactured), Liquid. NMFC Item 68140 Sub 6, LTL Class 70

**SECTION 15. REGULATORY INFORMATION**

CERCLA: None.

SARA TITLE III, Section 313 Toxic Chemicals: SARA TITLE III, Section 313 Toxic Chemicals: Aqua ammonia/Ammonium hydroxide (8-14%)

**SECTION 16. OTHER**

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