

1. Identification

Product identifier	Brandt Sequestar Mix-All Chelate	
Other means of identification		
Product code	21013	
Recommended use	Agricultural/ Horticultural Use- Micronutrient Fertilizer- Refer to product label.	
Recommended restrictions	Refer to product label.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Brandt Consolidated, Inc.	
Address	2935 South Koke Mill Road Springfield, IL 62711 United States	
Telephone	Corporate Office	1-217-547-5800
Website	www.brandt.co	
E-mail	msds@brandt.co	
Contact person	EH&S / Regulatory Department	
Emergency phone number	CHEMTREC (24 hours): USA, Canada, Puerto Rico 1-800-424-9300 Virgin Islands 1-800-424-9300 International Maritime +1 (703) 527-3887	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Reproductive toxicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning	
Hazard statement	Suspected of damaging fertility or the unborn child. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	If exposed or concerned: Get medical advice/attention.	
Storage	Store locked up.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	None known.	
Supplemental information	39.13% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 39.13% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.	

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ferric EDTA, Sodium Salt		15708-41-5	57.11
Manganese EDTA, disodium salt		15375-84-5	30.93
Disodium Octaborate Tetrahydrate		12008-41-2	2.45
EDTA, Disodium Copper(II) Salt		14025-15-1	2.16
Other components below reportable levels			7.35

*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	Nausea, vomiting. Coughing.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
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	Use water spray to cool unopened containers.
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. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Prevent product from entering drains. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
--------------------------------------	--

Conditions for safe storage, including any incompatibilities Store locked up. 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)

Components	Type	Value
Manganese EDTA, disodium salt (CAS 15375-84-5)	Ceiling	5 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Disodium Octaborate Tetrahydrate (CAS 12008-41-2)	STEL	6 mg/m ³	Inhalable fraction.
EDTA, Disodium Copper(II) Salt (CAS 14025-15-1)	TWA	2 mg/m ³	Inhalable fraction.
	TWA	1 mg/m ³	Dust and mist.
		0.2 mg/m ³	Fume.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
EDTA, Disodium Copper(II) Salt (CAS 14025-15-1)	TWA	1 mg/m ³	Dust and mist.
Manganese EDTA, disodium salt (CAS 15375-84-5)	STEL	3 mg/m ³	Fume.
	TWA	1 mg/m ³	Fume.

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

If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Use of an impervious apron is recommended.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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

Dry flowable granules.

Physical state

Solid.

Form

Solid.

Color

Yellow to Green

Odor

Not available.

Odor threshold

Not available.

pH

7 (20 g/L)

Melting point/freezing point

Not available.

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	0.000005 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	986 °F (530 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	0.9 g/cm ³
Density	1.78 g/cm ³ estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.78 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

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.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Nausea, vomiting. Coughing.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Brandt Sequestar Mix-All Chelate		
Acute		
Dermal		
LD50	Rabbit	81967 mg/kg estimated

Product	Species	Test Results
Inhalation		
LD50	Rat	378 mg/l, 4 hours estimated
Oral		
LD50	Rat	5058 mg/kg estimated
Components	Species	Test Results
Disodium Octaborate Tetrahydrate (CAS 12008-41-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Guinea pig	5300 mg/kg
	Rat	2550 mg/kg
		2 g/kg

* 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 a respiratory sensitizer.

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.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Product	Species	Test Results
Brandt Sequestar Mix-All Chelate		
Aquatic		
Fish	LC50	Fish
		172.8788 mg/l, 96 hours estimated
Components	Species	Test Results
Disodium Octaborate Tetrahydrate (CAS 12008-41-2)		
Aquatic		
<i>Acute</i>		
Crustacea	LC50	Daphnia magna
		619 mg/l
Fish	LC50	Pimephales promelas
		370 mg/l

Components	Species	Test Results
EDTA, Disodium Copper(II) Salt (CAS 14025-15-1)		
Aquatic		
Fish	LC50	Channel catfish (<i>Ictalurus punctatus</i>) 838 mg/l, 96 hours
Ferric EDTA, Sodium Salt (CAS 15708-41-5)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 100 mg/l, 96 hours

* 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	No data available.
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. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
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	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. Regulatory information

US federal regulations	This product is 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, Disodium Copper(II) Salt (CAS 14025-15-1)	Listed.
	Manganese EDTA, disodium salt (CAS 15375-84-5)	Listed.
SARA 304 Emergency release notification	Not regulated.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not regulated.	
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
Hazard categories	Immediate Hazard - No Delayed Hazard - Yes 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)

Chemical name	CAS number	% by wt.
Manganese EDTA, disodium salt	15375-84-5	30.93
EDTA, Disodium Copper(II) Salt	14025-15-1	2.16

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Manganese EDTA, disodium salt (CAS 15375-84-5)

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. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Disodium Octaborate Tetrahydrate (CAS 12008-41-2)

EDTA, Disodium Copper(II) Salt (CAS 14025-15-1)

Manganese EDTA, disodium salt (CAS 15375-84-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

EDTA, Disodium Copper(II) Salt (CAS 14025-15-1)

Manganese EDTA, disodium salt (CAS 15375-84-5)

US. California Proposition 65



WARNING: This product can expose you to chemicals including arsenic, cadmium, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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

Issue date	02-14-2018
Version #	01

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 own tests of the Product to determine suitability of the Product for user's particular use.